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FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR

OREGON

Report Prepared

by

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Soil Conservation Service
and
Oregon Agricultural Experiment Station
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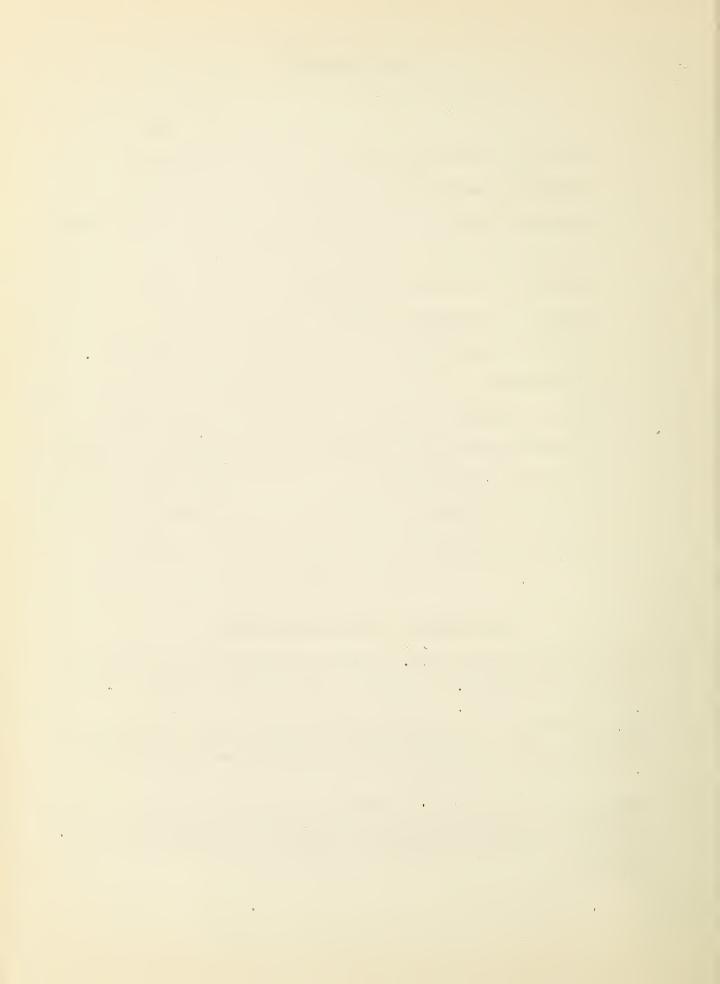
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Definition of Terms on Map Following

Good - Runoff prospects normal or better, with sufficient flow for all demands of current scason, and in the case of holdover reservoirs, for replacement of evaporation and other natural reservoir losses.

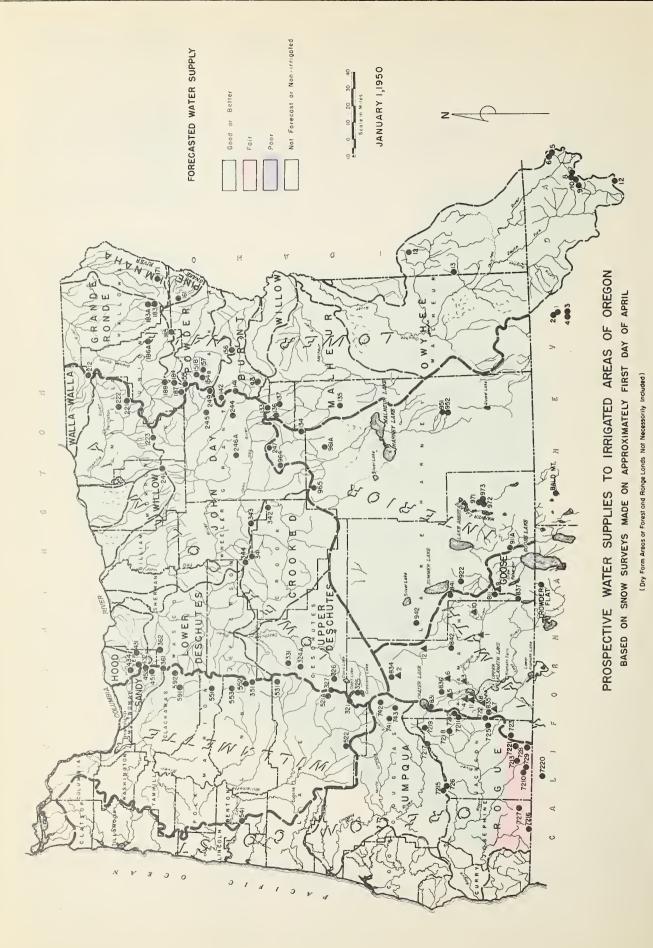
Fair - Subnormal runoff prospects, with some deficiency in meeting demands of current season when holdover storage is not available. If holdover storage available, adequate supply for current demands assured by some depletion of holdover storage.

Poor - Greatly subnormal runoff prospects with considerable deficiency of water for demands in current season when holdover storage not available. If heldover storage available, runoff prospects are considered poor if very heavy depletions of holdover storage are necessary to meet current demands.



INDEX TO SNOW COURSES

| Elev. | | | 0067 | | 6200 | | 0299 | 7900 | 5200 | 5293 5100 | 6900 | 5150 | | 5720 | | 6720 6480 | | | 4 | 4500 5315 3000 | 3730 ek 4215 | | | 6018 | 6500 | 1,000 | 3730 | | | 6800 | 3720 | 4630 3500 600 | 5140 |
|--------|--|-------------------------------|---------------------------|-----------------------|-------------------|------------------|---------------------|--------------------|---------------|--------------------------------------|---------------------------------------|-------------------------|--|---------------|---|------------------------------|---------------------|----------------------|-------------------------------|--|---|--------------------------------------|-----------------------------|---|---|---------------------------|-----------------------|-------------------------|---------------------------|-------------------|-------------------------------------|--|--|
| Name | INTERIOR DFAINAGE | SILVER LAKE | Silver Creek | CHEYAUGAN RIVER | Mill Creek | HARNEY BASIN | Deer Creek | Fish Creek | Idylwild Park | Izee Summit Rock Spring | Silvies Snow Wountain | Starr Ridge | WARNER LAKE | Camas Creek | CUANO LAKE | Bald Mountain Guano Creek | WEST COAST DRAINAGE | TRADOITA DITUED | OMFUNA KLVER | Cnampion Diamond Lake Goolaway Cap | Coolaway Mountain N.Umpcua near Lake Creek | Trap Creek Whaleback | ROCUE RIVER | Althouse Annie Spring | Big Red Mountain Billie Greek Divide | Fish Lake Goolaway Gap | Goolaway Mountain | Hobart Lake | Little Red Mountain | Seven Lakes No. 1 | | Siskiyou Summit South Fork Canal | Waleback |
| Number | | | 27/6 | | 922 | | 61/6 | 952 | 961A | 964 134 | 951 | 2478 | | 911A | | Nev. 972 | | | ć č | 726 726 726 | 7215 | 741 7217 | | 7216 831 | 729 722 | 725 726 | 7215 | 7221 | 7210 | 7211 | 72.19 | 7218 | 7217 |
| Elev. | | 2325 4880 | 4500 5750 | 4755 4800 | 2730 | 3990 | 2500 | | | | ir | | 5320 6800 6300 | 5600 | 5350 5350 5100 | | | 5720 | 5600 | 4 | | | | A OREGON R STATIONS | | 0067 | 4761. | 7200 | 4533 1653.3 | 7200 | 7,0% 7,600 | 4000 | 2504 |
| Name | WILLAMETTE RIVER | Breitenbush Cascade Summit | Champion Charlton Lake | Hogg Pass McKenzie | Marrion Forks | Santiam Junction | naluo Lake | KLAMATH LAKE BASIN | Annie Spring | Billie Creck Divide Chemult No. 1 | Crowder Flat Hvatt Prairie Reserve | Lake of the Woods No. 1 | Quartz Mountain Seven Lakes No. 1 | Strawberry | Sun Mountain Taylor Rutte | | GOOSE LAKE BASIN | Camas Creek | Quartz mountain Strawberry | | | | | INDEX TO THE CALIFORNIA OREGON POWER COMPANY SNOW WATER STATIONS | KLAMATH LAKE BASIN | Beatty | Chemult. Chiloonin | Crystal Fort Clemeth | Kirk Lake of the boods | Pelican | edarts Mountain Richardson Ranch | Idmsey GOOSF LAKF BASIN | Cuartz Mountein |
| Number | | 551 321 | | | | 552 |)/TTV | | | | Calif. | 835 | 7211 | 837 | 836 872 | } | | 911A 613 | 837 | | | | | NI NI | | | | 144 | .91 | · to (| 10, | 74 | 6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elev. | 63 | | 5070 | | 3025 | 5050 | 5070 | | | 2400 | | 2700 | 5900 5900 | 6650 | 5293 5293 | 6300 | | 00.7 | 7,400 | 3500 | 5670 | 7270 | 7200 | 7,600 | | 1,500 | 0009 | | 3500 | 3700 | | 37,00 | |
| Name | LOWER COLUMBIA DRAINAGE | WALLA WALLA RIVER | Tollgate | UMATILLA RIVER | Vanione Construct | Lucky Strike | Meacham Tollgate | WILLOW CORREY | | Arbuckle Mountain | JOHN DAY RIVER | Arbuckle Mountain | Beach Creek Summit Blue Mountain Spring | Dixle Springs | Cold Center Izee Summit | Snow Mountain Starr Ridge | DESCHUTES RIVER | אסמים ווסייילוים | | Unariton Lake Clear Lake Crescent Lake | Derr Hogg Pass | Marks Greek New Dutchman Flat | Oohoo Meadows Rock Creek | Three Creeks Meadows | HOON BIVER | Grooks Mendows | Tilly Jane-Mt. Hood | SAUDY RIVER | Clear Lake | Still Creek | CLACKAMAS RIVER | Clackamas Lake Peavine Ridge | |
| Number | | | 212 | | 222 | 223 | 212 | | | 241 | | 241 | 246A 133 | 577 | 796 367 | 247B 247B | | 326 | 327 | 361 325 | 343 | 344 324A | 362 | 342 | | 431 | 132 | | 361 | 757 | | 592 | |
| Elev. | CE | | 6300 | 6500 8200 | 7900 | ta. 6600 | 7000 | 7800 | 7000 | 0069 | | | 5000 | 5375 | 5100 | | 5950 | 5098 | 5100 | | 7125 5800 | 5430 | 5340 6775 6000 | 5740 | | 9400 | | 75.50 | | 7,480 | 7125 | 5970 5850 | 6000 577.3 577.3 |
| Name | UPPER DOLUMBIA DEALWAGE Lower Snake in Oregon | OWYHEE RIVER | | | Fish Creek | | | | | Silver Sity | | ; | Muchfulf KIVER Blue Vountain Spring | Crane Prairie | Lake Creek Rock Spring Stinking Water | BURNT RIVER | Barney Creek | Blue Mountain Summit | Tipton | POTIDITE RIVER | Anthony Lake Bourne | Dooley Mountain Ellertson Meadows | Goodrich Lake | Taylor Green | PINE CENTER | Schneider Meadows | INMAHA RIVOR | Coverdale | GAMMOR ROWNERING P | Aneroid Lake | | Server Reservoir Camp Carson Mous Spring | 'ummit Springs Trylor Green Coll.ate |
| Tumber | | | | Nev. 1 | 755 | Nev. 5 | | Hev. 2 | | Ida. 12 | Ida. 15 | | 133 | 137 | 134 | | 143 | 141 | 142 | | 155 | 156 1518 | 157 | 185 | | 161 | | 171 | | 133 | 155 | 187 186A | 137 135 212 |



April 1, 1951

FINAL WATER SUPPLY OUTLOOK

Oregon's 1951 water supply outlook is "good" to "excellent" throughout the State, with short supplies to be expected only in the Applegate and Illinois River drainages. Stored water in reservoirs is 112 percent average and many reservoirs are spilling now to be ready to receive later heavy flows.

Mountain snow cover is now above average on 55 percent of all snow courses measured, but is below last year on 85 out of 116 courses. State-wide water content of snow is 117 percent average and 86 percent of last year. Snow-stored water now present above 5000 feet elevation is 113 percent average and 91 percent of last year, while at low elevations, between 2,000 and 5,000 feet, it is 129 percent average but only 73 percent of last year.

Watershed soils are believed to be in the wettest condition experienced in many years - a factor that will favor total and sustained flow of Oregon streams. Crop land soils are likewise extremely wet throughout the state, although in a few scattered areas with light soils the top few inches are already dry with first demands for irrigation water having been made.

Reservoired water supplies are generally excellent although increased storage in a few instances would relieve irrigation district managers' minds. Total water stored in all larger Oregon reservoirs is 18 percent greater than last year, 30 percent greater than in 1943 and 12 percent greater than the 10-year average, 1940.49% Storage has improved this year so much that 22 out of 27 reservoirs reporting are half full or better. Many are spilling water in preparation to receive heavy inflows yet to come. The huge Owyhee reservoir is full for the first time since 1946.

Many small privately owned reservoirs throughout the state are reported to be full or filling and will furnish satisfactory water supplies this year.

Streamflow is forecast above the 10-year average, 1940-49, throughout the state except in the Umatilla basin and in Illinois and Applegate drainages where it will be 93, 76 and 76 percent average respectively. Only in the latter two stream basins is any serious shortage of water expected.

The Deschutes basin will have the heaviest flows compared to average with percentages running from 132 to 173. Other heavy flows will occur on the Owyhee, 158 percent; the Blitzen; 149; the Imnaha, 135; the John Day forks, 125 to 142 percent; Mood River, 126-140; and on Willamette Tributaries on the west slope of the Cascades with 123 to 132 percent average.

Tabulated streamflow forecasts are presented on pages 2,3, and 4. Present reservoir storage compared with past years and average will be found on Page 5. Detailed reports for eight local water forecast meetings are presented on pages 6 to 18, inclusive.



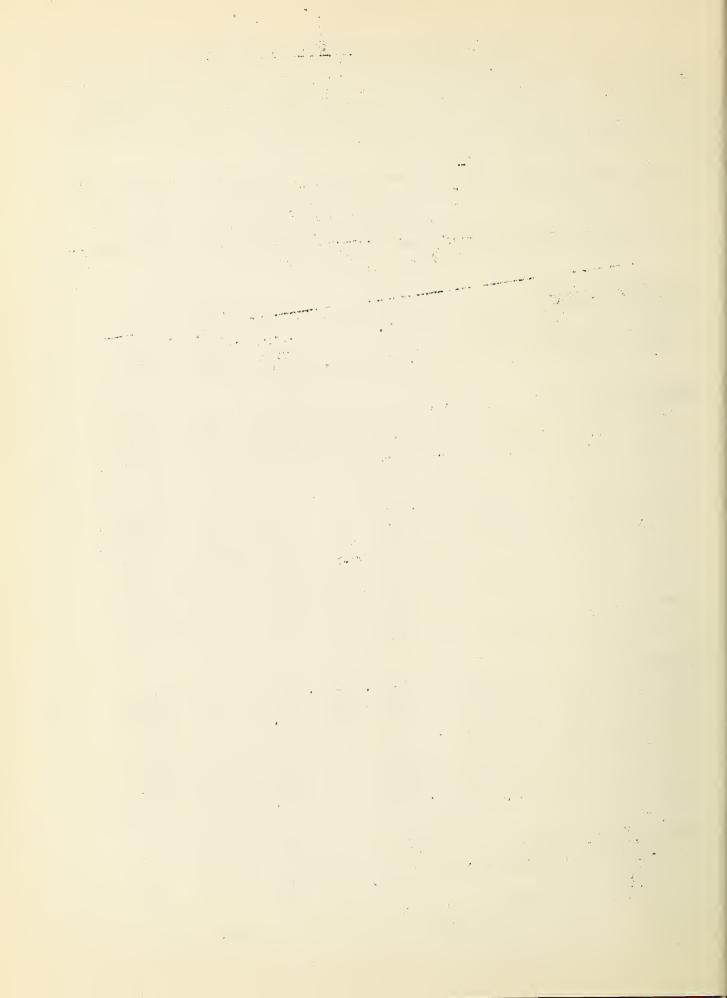
FINAL STREAMFLOW FORECASTS, APRIL 1, 1951

The following summarized runoff forecasts are based on mountain snow cover and on the assumption that precipitation and temperature during the renoff season will be approximately normal. Appreciable deviations flow normal of temperature and/or precipitation, especially during April, May or June, will correspondingly modify these forecasts.

| BASIN AND STREAM | | | •Streamfl sured Ru | | hous, A.F. |
|---|---------|-------|-----------------------|----------------|---|
| | 1951 | 1950 | 1949 | | 1940-49 |
| | | | | | |
| NORTHCENTRAL OREGON | , | | | | |
| Hood River, W. Fk. near Dee | 200.0 | 228.6 | 225.1 | 158.1 | |
| White R. below Tygh Valley | 185.0 | а | 265.6 | 177.0 | 139.8 |
| Hood R. at Powerdale plus | | | | | |
| Power Canal | 365.0 | 497.6 | 483,2 | 338.9 | 289 "5 |
| UMATILLA-WALLA WALLA | | | | | |
| Walla Walla R So Fk on Milton | 70.0 | a | 84 + 8 | 102.1 | 68 .6 |
| Umatilla R. near Gibbon | 85.0 | 106.7 | | 148 -7 | 87,7 |
| Umatilla R, at Pendleton | 160 .0 | a | 212.9 | | 171.3 |
| McKay Cr. above McKay Reservoir | 25.0 | ۵ | 22.7 | 63.4 | 29 .6 |
| | | | | | |
| NORTHEASTERN OREGON | | | | 5000 | |
| Grande Ronde R. Nr. LaGrande | 160.0 | а | 191.5 | 366.2 | 182.2 |
| Catherine Creek mear Union | 75.0 | а | 730 | 109.9 | 70 •2 |
| Bear Creek near Wallowa | 0.08 | а | 73-6 | 93 5 | 70.5 |
| Lostine Renear Lostice | 140.0 | а | 130~2 | 153.5 | 122 9 |
| Hurricane Cr. nour Joseph | 50.0 | ۵ | 48.6 | 59 34 | 45 32 |
| Wallowa R. E.Fh. pius Power Pl. Imnaha Rivex at Jouaba | 13.0 | a | 254-0 | 15 sr 451 s | 11 ₃ 3 295 ₃ 7 |
| Powder River at Salastary | 75.0 | a | 70.0 | | |
| Burnt R. nr. Hereford (Natural Flow | | a | 47.0 | 62.57 | 40.3 |
| But We It a III and a color of the cut at 110 | v) 50•0 | Ct | 7150 | 0251 | -£O 9 O |
| EASTERN OREGON | | | | | |
| Malheur Ro Mid , Fko nr . Drewscy | 80.0 | 70.0 | 68 •5 | 74 ×0 | 75 .1 |
| Malhour Ro No Fko at Beulah | 66 •0 | 57 .0 | | 64.4 | |
| Owyhee R. above Owyhee Reservoin | r 625.0 | 320.0 | 456.4 | 237.3 | 397.0 |
| John Day R. at Prairie City, | | | | | |
| combined with Power Canal | 65.0 | а | 44.9 | | 51 28 |
| John Day R. Mid. Fk. at Ritter | 160.0 | а | 123.2 | 223.7 | 121.4 |
| John Day R. No. Fk. near Dale | 325.0 | а | 288 • 2 | 425.0 | 228 +8 |
| Strawberry Cr. nr.Prairie City | 8.5 | а | 8.3 | 11.0 | 8.4 |
| HARMEY BASIN | | | | | |
| Silvies R. near Burns | 80.0 | a | 79.1 | 133.1 | 94.2 |
| Donner und Blitzen R. nr.Frenah | | | | | |
| glen | 95.0 | а | 45.9 | 81.4 | ვ 3 •2 |
| Trout Creek near Denio | 13.0 | а | 5.1 | 8.4 | .8 ∙ 6 |
| | | | | | |

^{* -} Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer

a - Discharge data not available c - Forecast by Boise office



Streamflow Forecasts, April, 1951 (Cont'd.)

| Streamflow Forecasts, April, 1951 (| (Cont'd.) | | | | |
|--|-------------------|-------------------|-------------------|-------------------|--------------------|
| | lprSept. | | | | |
| BASIN AND STREAM | Forecast | Meas | urcd Run | off% l(| O-yr · Avg · |
| | 1951 | 1950 | 1949 | 1948 | 1940-49 |
| CENTRAL OREGON | | | | | |
| Ochoco Reservoir Net Inflow | 28.0 | a | 33,3 | 72.3 | 27.8 |
| Crescent Lake Not Inflow | 28.0 | a | 29.4 | 27.4 | 16.2 |
| Little Deschutes R. nr. Lapine | 120.0 | a | 122 1 | 105.1 | 75 • 0 |
| Odoll Creek near Crescent | 36.0 | a | 34.9 | 34.7 | 26.8 |
| Deschutes R. below Snow Creek | 78.0 | | 76.2 | 78.2 | 53.0 |
| Crane Prairie Reservoir Inflow | 145.0 | a | 151. 36 | 141.9 | 107.2 |
| Doschutes R. at Pringle Falls | 330.0 | a a | 285.9 | 262.4 | 254.0 |
| | 600.0 | | 550 al | 507.2 | 455.2 |
| Deschutes R. at Bennam Falls | | a | | | 45 •4 |
| Tumalo Creek and C. S. Canal | 60.0 | a | 58 ₆ 1 | 53.2 | |
| Squaw Crock near Sisters | 66 • 0 | а | 50 •8 | 56 •5 | 45.0 |
| SOUTHCENTRAL OREGON | | 7 | | ٦. | , |
| Chewaucan R. nr. Paisley Deep Creek hove Adel | 80.0 ^b | 67.2 ^b | 65.0 ^b | | 61 •8 ^b |
| Deep Creek Above Adel | 75.0b | 70.3 ^b | 71.4 ^b | 70.8 ^b | 60 •4 ^b |
| W SM DI DACTN | | | | | |
| KLAMATH BASIN | 230.0 | | 184.0 | 239.9 | 220.1 |
| Sprague R. nr. Chiloquin | | a | | 356.3 | |
| Williamson R. below Sprague R. | 350 • 0 | a 407.7 | 320.6 | | 360.6 |
| Upper Klamath Lake Net Inflow | 480.0 | 423.1 | 396.7 | 461.5 | 463.6 |
| Clear Lake Reservoir Net Inflow | 39.0 | 33.5 | 34.7 | 70.2 | 39.0 |
| Gerber Reservoir Net Inflow | 24.0 | 14.7 | 20•2 | 21.9 | 17.6 |
| SOUTHERN OREGON | | | | | |
| Applegate R. near Ruch | 85.0 | a | 118.4 | 166.3 | 111.1 |
| Hyatt Reservoir Net Inflow | 4.2 | a | 7.6 | 9.1 | 5.5 |
| Fourmile Lake Net Ladlov | 7,0 | α | 8 • 5 | 11.0 | 7.5 |
| Little Butte Cr.N.Fk. below | | | | | |
| Fish Lake (Natural Flow) | 13.2 | а | 18.9 | 16.2 | 13.4 |
| Rogue R.N.Fk. above Prospect | 350.0 | 387.6 | 375.5 | 343.7 | 287.2 |
| Rogue R.Mid.Fk. plus Power Canal | 85.0 | a | 91.1 | 83.1 | 70.1 |
| Rogue R. below South Fork | 750.0 | a | 790.8 | 732.5 | 622.1 |
| Rogue R. at Grants Pass | 950.0 | а | 975.0 | 1138.1 | 808.2 |
| Clearwater River above Trap Creek | | a | 71 •8 | 67 •4 | 59.9 |
| No. Umpqua R. below Lake Creek | 165.0 | a | 183.0 | 174.3 | 154.2 |
| | | | | | |
| WILLAMETTE VALLEY | 2 200 0 | | 2.02.0 | 200= 0 | |
| Willamette RoMid.Fk. at Eula | 1)00.0 | a | 1019,2 | 1025.9 | 755 •0 |
| McKenzie R. at McKenzie Bridge | 650 •0 | 771 •8 | 716 •4 | 646.4 | 525.4 |
| McAenzic River near Vida | 1400.0 | 1725.2 | 1516,7 | 1419.5 | 1116.7 |
| Clackamas R. at Big Bottom | 200.0 | а | 177.5 | 231 .1 | 151 •0 |
| Clackamas R. near Cazadero | 900.0 | а | 1159.0 | 843.6 | 732 •6 |

^{* -} Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer

a - Discharge data not available

b - april-June rather than April-Sept.

c - Forecast by Boise office

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OREGON STREAMFLOW FORECASTS, APRIL 1, 1951

The following forecasts are for the period April 1 through July 1 and will be of value both to irrigationists and hydro-power generating interests:

| and who remains now of the territories with the territories and the territories and the second secon | To large | Two C | the comfl | OTT 5 to 10 | hous a A.F. | | |
|--|---------------------|------------|-----------|------------------------------|-------------|--|--|
| BASIN AND STREAM | npr. July, Forecast | | sured I | 10-yrvg. | | | |
| DIOTA IIID OTIMIA | 1951 | 1950 | | 1948 | 1940-49 | | |
| A STATE OF THE PROPERTY AND ASSESSMENT OF THE PROPERTY ASSESSMENT ASSESSMENT OF THE PROPERTY ASSESSMEN | 1001 | 1000 | | name and a second or comment | | | |
| NORTHCENT FAL ONEGON | | | | | | | |
| Hood River, W. Fk. near Dec | 176.0 | 199.6 | 197.2 | 154.4 | 123.0 | | |
| White R. below Tygh Valley | 155.0 | a | 245.6 | 159.1 | 125.2 | | |
| ALLA WALLA | | | | | | | |
| Walla Walla R.So.Fk.nr.Milton | 58.0 | α | 70.4 | 86.1 | 56.3 | | |
| Umatilla R. at Pendleton | 155.0 | a | 208.5 | 304.9 | 166.2 | | |
| McKay Cr . above McKay Reservoir | 24.7 | a | 22.6 | 63.2 | 29.3 | | |
| NODE AND ADDRESS OF THE PARTY O | | | | | | | |
| NORTH ASTERN OREGON Walle 1a R.E.Fk.plus Power Pl. | 10.5 | a | 9.4 | 13.1 | 9.1 | | |
| Powder River at Salisbury | 72.0 | a | 68 .8 | 76.2 | 60 •1 | | |
| 20. dol May 2 do Balaboda y | 1200 | ~ | 00.0 | 1000 | 00 42 | | |
| EASTERN OREGON | | | | | | | |
| Owyhee above Owyhee Reservoir | 595 •0 | 299 .6 | 472.1 | 234.8 | 378 • 9 | | |
| | | | | | | | |
| CENTRAL OREGON | | | | | | | |
| Little Deschiter R. Mr. Lapine | 108.0 | а | 106.8 | 90.3 | 66.7 | | |
| Doschates Ro as bo ham Falls | 410.0 | a | 361.9 | 316.3 | 306 •6 | | |
| Deschutes R. at Fringle Falls | 220.0 | a | 162.8 | 132.1 | 155.9 | | |
| XLAMATH BASIN | | | | | | | |
| | | | | | | | |
| Williamson R. below Sprague R. | 287.0 | a 770 7 | 257.9 | | 295.9 | | |
| Upper Klamath Lake Nct Inflow | 370.0 | 336.3 | 317.0 | 367.8 | 363.6 | | |
| SOUTHERN OREGON | | | | | | | |
| Rogue R.So.Fk.above Imnaha Cr. | 48 •0 | a | 71.3 | 60:1 | 45.0 | | |
| Rogue R.Mid.Fk.plus Power Canal | 68.0 | a | 74.9 | 66.1 | 55.8 | | |
| Rogue R.N.Fk. above Prospect | 290.0 | a | 324.1 | 289.7 | 239.0 | | |
| Rogue River below So.Fk. | 610.0 | a | 664.4 | 598.3 | 502.2 | | |
| WILL, METTE VALLEY | | | | | | | |
| | | | | | | | |
| Clackamas R. at Big Bottom | 155 •0 | a | 195.6 | 141 •8 | 120.8 | | |

a - Discharge data not available

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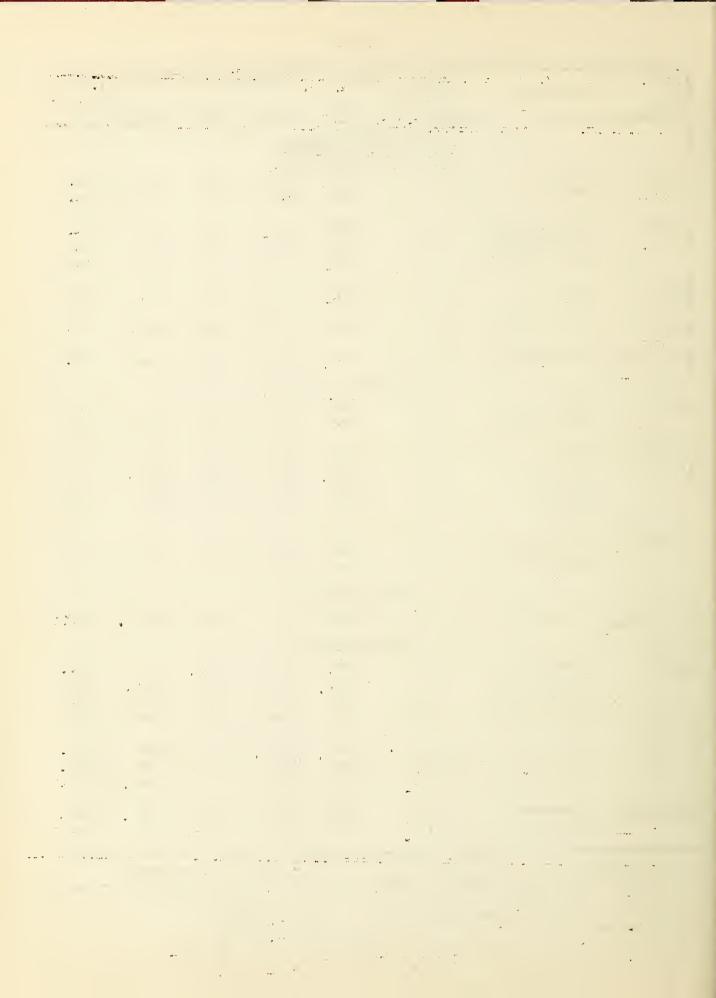
SOIL CONSERVATION SERVICE

U. S DEPT OF AGRICULTURE



STATUS OF RESERVOIR STORAGE, April 1, 1951 ASIN THOUS.A.F. IN STORAGE ABOUT APRIL 1, 1951 USABLE and RESERVOIR 10 yr avg. CAPACITY STREAM 1950 1949 1948 1940-49 (Thous .A.F.) 1951 UPPER COLUMBIA DRAINAGE LOWER SNAKE IN OREGON 17.1 Owyhee Antelope 36 ..5 30.0 22.2 12.0 11.8 715.0 397.9 574.2 Owyhee 715.0 529 8 356 - 7 Malhour 42 43 132.9 Warm Springs 191.0 88.0 45.8 64 2 36.5 53.6 45.5 53.1 Agency Valley 60.0 34.6 10.0d Willow Creek #3 21 50 3.5 2.9 7.0 8.2 25.2 15.0 6.3 13.0 12.0 16.1 Burnt Unity 17.4e 11.00 6.9e 16.5e Powder Thief Valley 17.4 Full Grande Ronde Wallowa Lake 40.9 17.9 11.9 17.8 17.8 20.8 LOVER COLUMBIA DRAINAGE 65.7 McKay 74.0 64.3 58.4 71 1 59 .8 Umatilla Cold Springs 50.0 50.0 45:4 45 67 50,0 47 9 26 58 Doschutes 46.0 43.1 18.0 31 ..2 29.0 Ochoco Crescent 54.9 50.4 52 68 51 37 48.7 38 ...8 36.0 Crane Prairie 55.3 53.1 47:1 37 .6 30.4 83,9[‡] 13000 188.0 185.3 0.831 149.8 Wickiup 30 Jb 17.8^f Cottage Grove 19.5 19.8 19.6 19.4 illamette 94.82b 53.85 Fern Ridge 62.8 62 c8 62 .1 65.0 70:5b Dorena 35.2 36.1 INTERIOR DRAINAGE 7.4h Silver Lake Thompson Valley 17,4 N.R. 5.2 N.R. N.R. WEST COAST DRAINAGE 4.9 5.1 3.6 4.7 Fish Lake 7.8 6.1 Rogue Fourmile Lakea 16.1a 12.5 7.8 7.7 2.4 3.6 Emigrant Gap 8.3 Full 8,4 8.4 8.3 7.9 Hyatt Prairiea 16.1a 3.9 6.3 6.7 4.7 8.1 Klamath Upper Klamath Lk 584.0° 478.5 438,6 378.4 431.1 500.4 Gerber 94.0 57.6 42 -0 32 .8 29.0 48.6 440.2 152.4 261.7 Clear Lake 139.3 149.3 172.3 1.21 1.1 4.1 2.9 3.0 0.0 Goose Lake Cottonwood 47.8 Drew 62.5 Full 54.3 46,3 27.3 N.R. - No Report - Excl. 141 -: 42 -: 47 d a - By ditch to Rogue River side from - Data partly estimated - subject Klamath Drainage to error - 143 -149 - Storage space reserved for flood f control - 142 -149 - Based on gage zero elevation of 4135.0 - Excl. 148 -149 h

- Excl. 142



IRRIGATION WATER SUPPLY FORECASTS

SEASON of 1951

- Forward -

Measurements of snow depth and water content were secured on all Oregon snow courses as near April 1 as possible. Watershed soil moisture determinations, usually made at 12 scattered stations but not taken during the past three years, were not obtained this year due to continued shortage of funds and personnel.

Local Water Forecast Committee Meetings were held this year in eight important irrigated regions of the state during the period March 30 to April 7 as follows: The Dalles for Northcentral Oregon; Bend for Central Oregon; Burns for John Day-Marney Basin; Pendleton for the Umatilla-Walla Walla Basin; Baker for Northeastern Oregon; Ontario for Southeastern Oregon; Lakeview for Southcentral Oregon and Medford for Southern Oregon. Most of the 38 cooperating agencies were represented at these discussions.

Each committee's report, outlining the irrigation water prospect for 1951 in its respective area, is summarized below. Modifications of these forecasts may be required later in accordance with deviations of precipitation and temperature from normal during the runoff season.

Forecasts

Northcentral Oregon

Ample water supplies for irrigation in Hood River, Wasco and Sherman counties appear to be assured from the present mountain snow cover which is now about 130 to 150 percent average. Although the snow cover is only 70 to 90 percent of last year, runoff from snow-melt water is expected to be only slightly less than last year and about 120 percent of the discharge average of 1940-49. Saturated soils, both high on the watersheds and in the crop lands, will greatly increase the amount of snow-melt water that reaches the main stream channels this year.

Hood River Valley lands should have adequate water supplies this year with the possible exception that areas served by water from the Mt. Defiance area may have some late season deficiencies.

West Fork of Hood River near Dee is forecast to discharge 200,000 acre feet during the April-September period. This flow is only slightly less than the 228,600 acre feet measured last year and 143 percent average of the 10 year period 1940-49. Most of this discharge, about 176,000 a.f., will be received in the April-July period.

Middle and East Forks of Hood River are not continuously gaged but from a relationship to the flow of the West Fork it is probable that Middle Fork will discharge about 73,000 a.f. and East Fork about 110,000 a.f. during the irrigation season April through September. This is an ample supply for all irrigation purposes.



Hood River at Powerdale plus Power Canal is forecast to discharge 365,000 a.f. in the next six months. This is 126 percent of the ten year average. About 170,000 a.f. will be measured in the first four months of the season.

Most lands on the West Side of Hood River Valley, served from the Mt. Defiance area, should have good water supplies but some may experience late season shortages.

Wasco County streams have already begun their spring runout and crop land soil moisture is reported to be excellent. Snow cover, as measured at Brooks Meadows, is only about 70 percent of last year, but it is 142 percent of an 18 year average.

Mill Creek, Fifteenmile Creek and other small streams should furnish adequate water supplies at least to the end of July this year, possibly longer. With good rains there will be no need for any regulation.

White River below Tygh Valley is forecast to discharge 185,000 acre feet for the balance of the water year and should provide a satisfactory water supply for the season. This flow will be 132 percent of the 10 year average and only slightly less than the flow measured last year. About 155,000 a.f. of this flow will come in the April-July period.

Badger, Rock and Gate Creeks and other small tributaries of White River should have a total flow slightly less than last year, but it is expected that the low flow will be better sustained than usual because of high soil moisture content.

Central Oregon

Snow cover in the main Deschutes watershed is about equal to that of last year, only slightly less than in 1949 and about 163 percent of average. In the Crooked River area the snow mantle is 89 percent of last year and 120 percent of average.

Watershed soils are thoroughly saturated and will require no "priming" this year. This means that a larger percentage of the snow-melt water than usual will reach stream channels. Late summer flows will therefore be much better sustained than usual.

Ochoco Creek has experienced several freshets including one early in February, and is now running a full stream.

Inflow to Ochoco Reservoir is expected to be not less than 28,000 acre feet in the next six months. This flow will be about the same as last year and approximately average. About 27,800 a.f. of this total will runoff in the first four months. Ochoco Reservoir now has in storage 43,110 a.f. and continues to rise slowly in spite of the fact that about 365 c.f.s. are being wasted. An ample supply of water is therefore available for all lands served from this source.

Crooked River near Post will probably discharge about the same amount of water as last year, possibly a little more. Snow on Snow Mountain is now about 118 percent average and slightly better than last year. At Ochoco Meadows it is 141 percent of the 22 year average and 91 percent of last year.



Discharge of the Deschutes River is characterized by its even flow nearly throughout the year. Many of its tributaries discharge more water in late summer and fall than in May and June when most of the snow is melting off. This is due to large supplies of underground storage water.

Crescent Lake Net Inflow will probably equal 28,000 a.f. in the next six months or 174 percent average. Crescent Lake now has in storage 50,460 a.f. and is being wasted to prevent over-filling.

Little Doschutcs River near Lapine is expected to flow 120,000 a.f. April through September, or 160 percent of the 10-year average. Water content of the snow at Crescent Lake course is 25.0 inches; a new record exceeding the 20.5 inches measured there a year ago. Water content of the snow as measured at Windigo and Willamette Passes is 96 and 91 percent, respectively, of last year's figures.

Odoll Creek near Crescent will probably discharge 36,000 a.f. during April-September or about 134 percent average. The previous record flow of 37,450 a.f. was established in 1943.

Flow of Deschutes River below Snow Creek is estimated at 78,000 a.f. for the next six months compared with the 10-year average of 53,000 a.f. The 1948 flow was 78,200 a.f. In 1943 a total of 85,000 a.f. was discharged in six months.

Inflow to Crane Prairie Reservoir, where storage is now 53,130 a.f., is forecast at about 145,000 acre feet or 135 percent of the 1940-49 average. Inflow for the six months was 151,600 a.f. in 1949 and 141,900 a.f. in 1948.

Doschutes River at Pringle Falls is expected to discharge 330,000 acre feet April through Soptomber or about 130 percent average. The 1949 discharge was 285,900 acre feet while in 1948 it was 262,400 a.f.

Natural flow of the entire Deschutes River is represented by the discharge as measured at Deschutes River at Benham Falls where 1951 discharge is forecast at 600,000 a.f. for the next six months. This will be 132 percent of the 1940-49 average of 455,200 a.f. and a larger flow than was measured in 1949 when 550,100 a.f. was recorded.

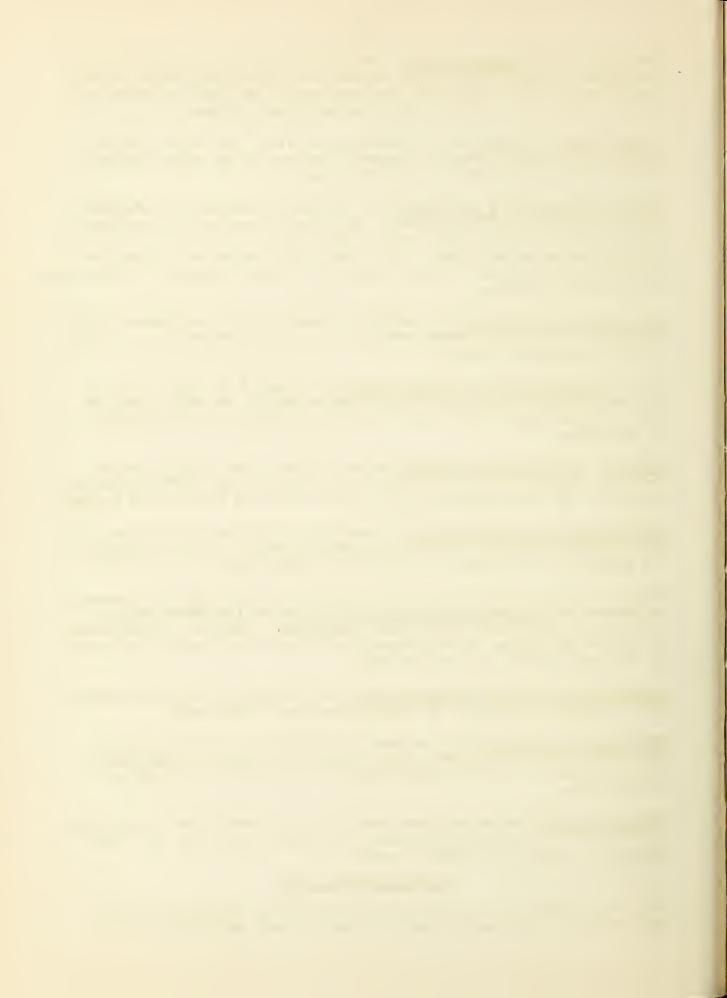
Tumalo Creok and Columbia Southern Canal will discharge about 60,000 a.f. or 132 percent of average. The 1949 discharge was 58,100 a.f.

Squaw Creek near Sisters with an expected discharge of 66,000 a.f. will have a full head of water until about August 1 assuring the lands served from the Plainview and McAllister Ditches of good supplies at least up to that dato.

Wickiup Reservoir is now full with 188,400 a.f. in storage and a huge inflow yet to come. Nater users served from the Deschutes River will have ample irrigation supplies for another season.

John Day-Harney Basin

Good water supplies are expected this year in Harney Basin where present snow cover has water content equal to last year and about 130 percent of



average. This in spite of early runoff which was experienced in early February and mid-March. Snow cover remaining on the mountainous watersheds is now in an exceptionally "ripe" condition for melting and a heavy rain at this time would tend to wipe out the valuable storage reserve in the present snow.

Flow of Silvies River near Burns is expected to be about 80,000 a.f. during April-September or 85 percent of the 1940-49 average. This is a flow similar in amount to that in 1949 but considerably loss than the 133,000 a.f. measured in 1948. The Silvies should provide a better supply than last year and sufficient for the usual needs.

Silver Creek has had little or no low runoff in the last 4 years but is now draining into Harney Lake. Water content of the snow at Snow Mountain is now 16.5 inches compared with 16.1 inches last year and 15.0 inches in 1949. This year's water supplies from Silver Creek should be better than last year.

Donner und Blitzen River is forecast to discharge 95,000 a.f. in the remaining six months or 149 percent average. The 1948 discharge was 81,400 a.f. Water content of the snow on the Fish Creek snow course (7900 feet elevation) is now 32.8 inches compared with 27.0 inches last year and an average of 23.9 inches. This should provide an ample water supply for lands served from this stream.

Trout Creck near Denio is expected to discharge 13,000 a.f. compared with 5,100 in 1949 and 8,400 in 1948. The lo-year average, 1940-49, is 8,600 a.f. This will be a much better water supply than that available last year and should be sufficient for all usual needs.

The John Day Basin can expect to have good to excellent water supplies the balance of this year. Water content of the snow is about 88 percent of last year but 115 percent of average.

North Fork of John Day River near Dale is forecast to discharge 325,000 a.f. or 142 percent of the 1940-49 average during the April-September period. This will not equal the 1948 discharge of 425,000 a.f. but will be nearly as much as was discharged last year.

Middle Fork of John Day River at Ritter is expected to discharge 160,000 a.f. April through September or considerably more than the average flow of 121,400 a.f. Discharge in 1948 was 223,700 a.f.

John Day River at Prairie City plus Power Canal is estimated to discharge about 65,000 a.f. compared with 91,400 in 1948 and a 10-year average of 51,800 a.f. This year's discharge should be slightly better than last year's.

Sufficient water supplies for all usual needs are expected in the John Day Basin for the 1951 scason.

Strawberry Crock near Prairie City will flow about 8,500 a.f. compared with 8,300 in 1949 and an average flow of 8,400 a.f. The flow in 1948 was 11,000 a.f.



Umatilla-Walla Walla Basin

Snow cover on the watersheds of this region is sufficient to provide good to excellent water supplies this season. Snow stored water on the Walla Walla drainage area is only 88 percent of last year but 105 percent average. On the Umatilla it is 81 percent of last year and 109 percent average. On the headwaters of Birch, Butter and Willow Creeks it is about 80 percent of last year and 125 percent average. Soils under the snow are all saturated.

Crop land soil moisture is excellent with the subsoils saturated. However, the top 3-4 inches of soil in the west end is already dry and irrigators are asking for water.

South Fork of Walla Walla River near Milton will discharge 70,000 a.f. during the period April through September as compared with the ten year average of 68,600 a.f. April-July discharge will be about 58,000 a.f. Adequate water will be available for lands served by this stream except that some late season deficiencies may occur for late water rights on the Hudson Bay and Pleasant View Canals. These deficiencies could easily be alleviated by good summer rains.

Umatilla River near Gibbon above Meacham Creek is forecast to discharge 85,000 a.f. April through September or 97 percent of the 10-year average of 87,700 a.f. Of this amount about 80,000 will come in the first four months.

Umatilla River at Pendleton will probably discharge 160,000 a.f. during the six months of irrigation as compared with 171,300 a.f. average of the 10 years 1940-49. 155,000 a.f. will flow during the period April-July. There will probably be less water available than last year but there should be sufficient water for all usual purposes.

Flow of the main river has been better sustained and of higher volume consistently throughout the winter than is usually the case. Last fall's abundant precipitation is partially responsible for this.

Cold Springs Reservoir is now full and spilling with 50,000 a.f. in storage. Ample water is therefore available for lands served from this source. The Hermiston began delivering water on March 26 this year. Delivery usually begins about the 10th of April. Low snow provided some runoff directly into the reservoir but it did not equal 12,000 a.f. received last year from local spring freshets.

McKay Reservoir now contains 62,300 a.f. and will more than fill with water yet to come down McKay Creek. The management has been spilling water off and on beginning in January to prevent undue high water that would adversely affect lands downstream from the dam.

McKay Creek above McKay Reservoir will discharge 25,000 acre feet into the reservoir as compared with 29,600 a.f. average and will about equal the discharge of last year. The first four months will bring 24,700 a.f. or practically all of the flow for the balance of the season. Excellent water supplies for all lands served from this source are assured.

Birch Creek watershed has a good snow pack as measured at Lucky Strike where the snow contains 16.2 inches of water compared with 18.3 inches last year and an average of 12.8 inches. Because of the saturated condition of the soils, it is expected that water supplies in this area will be about the same as last year.

Butter Creek and Willow Creek watersheds have a snew pack about 125 percent average and 31 percent of last year. Arbuckle Mountain snew course now has 12.9 inches of water in the snew compared with 16.0 inches last year, and an average of 10.3 inches. Water supplies in these areas should be fairly satisfactory but will probably not equal those of last year.

Northeastern Oregon

Good to abundant water supplies in 1951 for mallowa, Union and Baker counties are expected to come from the mountain snow cover which is now 7 to 16 percent above average and about 5 to 15 percent below last year. Streamflow is forecast to be from 7 to 35 percent above average except on the Grande Ronde which is expected to discharge 88 percent average. Satisfactory supplies of water for all usual needs seems assured.

Snow cover in Wallowa county as measured at Aneroid Lake is now 96 percent of last year and 116 percent average.

Flow of the Imnaha River at Imnaha for the next six months, April through September is forceast at 400,000 acre feet compared with 254,000 in 1949 and an average of 295,70) for the 10 years 1940-49. This will be nearly as much water as was measured in 1948 when 451,200 acre feet were discharged.

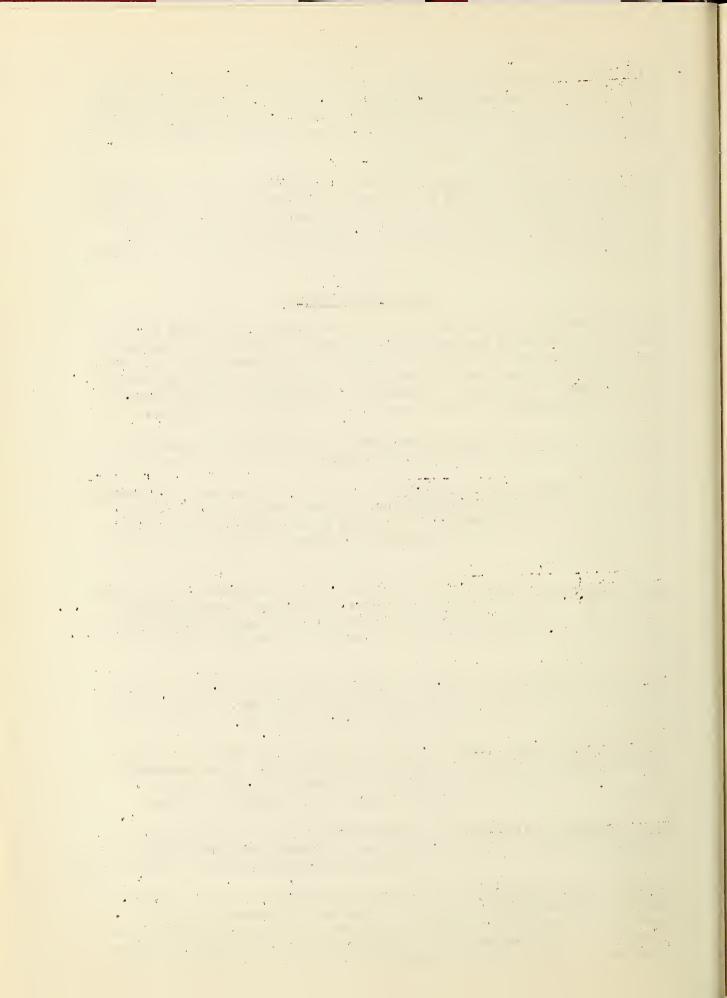
Wallowa River, East Fork, plus the power plant is estimated to discharge 13,000 acre feet in the next six months. The 10-year average flow is 11,300 a.f. In 1949 the flow was 11,300 acre feet and in 1948 15,700 a.f. The East and Wost Forks will together provide an adequate flow into Wallowa Lake.

Wallowa Lake reservoir already is holding better than 18,000 a.f. compared with a storage of 11,900 at this date a year ago. Average storage on April 1 for the 1940-49 period is 20,800 acre feet.

Hurricane Creek near Joseph discharged 48,600 a.f. in 1949 and is foreeast to discharge 50,000 a.f. this year between April 1 and September 30. This flow will be 111 percent of the 10-year average flow of 45,200 a.f. In 1948 this stream produced about 59,400 acre feet.

Lostine River near Lostine, the largest tributary of Wallowa River, is expected to flow a total of 140,000 acre feet compared with 130,200 a.f. in 1949 and 153,500 in 1948. The 10-year average discharge is 122,900 a.f.

Bear Creek near Wallowa will probably flow 80,000 a.f. in the April-September period or about 114 percent of the average figure of 70,500. In 1948 the flow was 93,500 and in 1949 it was measured at 73,600 a.f. Discharge of this stream usually tapers off earlier than other Wallowa tributaries, but the flow is expected to be well sustained this season.



The main Grande Ronde drainage area has a snow cover 87 percent of last year's, and just slightly better than average, but will still give Union County a good supply of water in 1951.

The Grande Ronde River near LaGrande is forecast to flow 160,000 acrefect the remaining six months of the water year as compared with 191,500 in 1949 and 182,200 average. This flow will be only 88 percent average, but should be sufficient for all usual water needs. Soveral freshets occurred on this stream in February and March and the heavy summer flow has already begun.

Cathorine Creek near Union has only just begun to run out and did not appear to have ony freshets as was the case on the main rever. Discharge for the six months April through September is expected to be 75,000 acre feet, 107 percent average. In 1949 73,000 acre discharged. Better flow of this stream is attributed to a heavier snow cover and a later runoff.

Eagle and Pine Creeks should provide greater discharges this year than last since the serw cover is slightly heavier and the watersheds are wetter. Schneder Meadows snow contains 30.8 inches of water compared with 30.4 last year and a 13 year average of 28.6 inches.

Although the lack of continuous stream discharge records for North Powder River prevent the making of adequate forecasts for its discharge, the expected flow this year should be only slightly under that of last year. Show as Anthony Lake now contains only 24.0 inches of water compared with 31.6 inches last year and a 15 year average of 27.5 in. Only smaller atreams on the east face of the Elkhorn Range should have a similar flow.

The Poweer River at Salisbury also has a snow cover slightly less in water content than a year ago. Discharge of this river is forecast at 75,000 asf. compared to 70,000 in 1949 and an average of 62,300 asf.

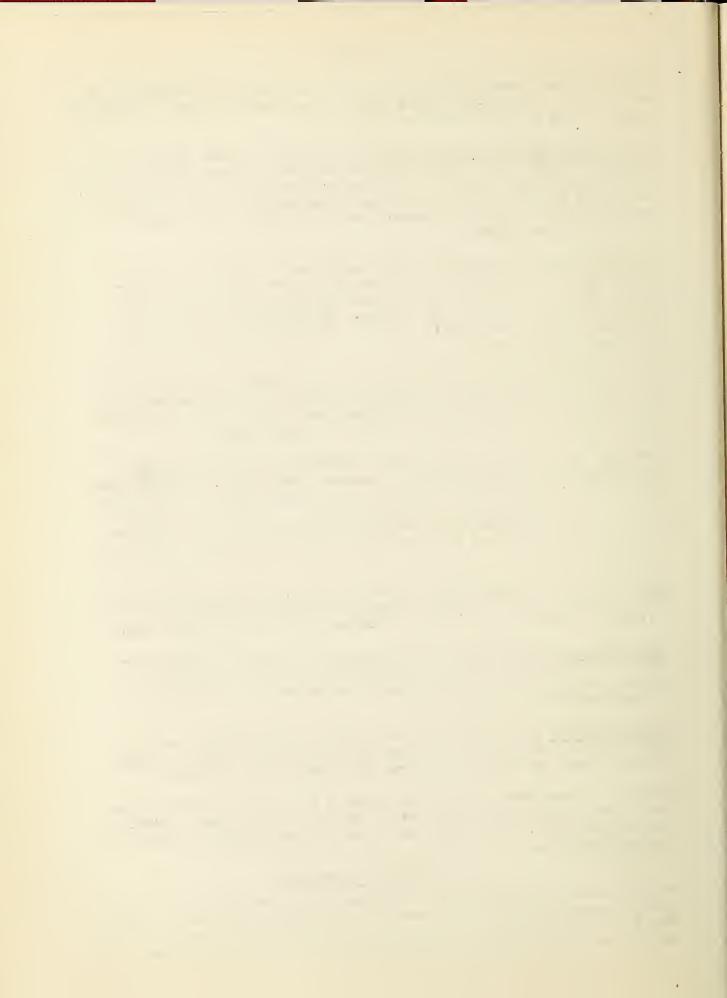
Burnt River near Hereford (with corrections for storage in Unity reserveir) is forecast to discharge 50,000 acre feet in the next six months compared to 47,000 in the same period in 1949. The 10-year average discharge is 40,300 asf.

Unity Reservoir now has 15,000 acre feet of water in storage and is bypassing water to provide for high stream flow yet to come. A satisfactory supply for lands served from this source seems assured.

Crop soils throughout the area are reported to be excellent in moisture condition, except in some areas where still too wet to work. Subsoils are all saturated. Soils under the mountain snow blanket are extremely wet and unfrozen.

Southeastern Oregon

Good to ample water supplies are in sight for all irrigated lands in Malheur county this year. The mountain snow pack, which increased in water content much more than was to be expected during March, is already melting off and flowing into reservoirs or on to the Snake River.



Crop land soils are well wet this year due to mid-winter melting of snow as well as to an unusually heavy fall precipitation. The top 3 or 4 inches in some of the lighter soils have dried out to a degree that farmers are already asking for water, but the subsoils are all very wet.

Water content of the snow on the Malheur watersheds is 82 percent of last year, but 116 percent of average. Where usually the snow diminishes between March 1 and April 1, this year all but one snow course showed an increase in water.

Flow of the Malhour River, Middle Fork near Drewsey is forecast at 80,000 a.f. April through September. About 70,000 a.f. were discharged last year and the 10 year average flow is 75,100 a.f. Warmsprings Reservoir with 88,000 a.f. now in storage will probably peak at about 120,000.

The Malheur River, North Fork at Boulah is expected to discharge 66,000 acre feet in the next six months compared to about 57,000 last year and a 10-year, 1940-49, average of 60,300 a.f. Inflow to Agency Valley Reservoir has brought the storage up to 36,500 a.f. already and should fill it this season.

Total water available to the Vale-Oregon and Warmsprings Irrigation Districts this year should be about 270,000 acre feet and a supply sufficient for all usual needs.

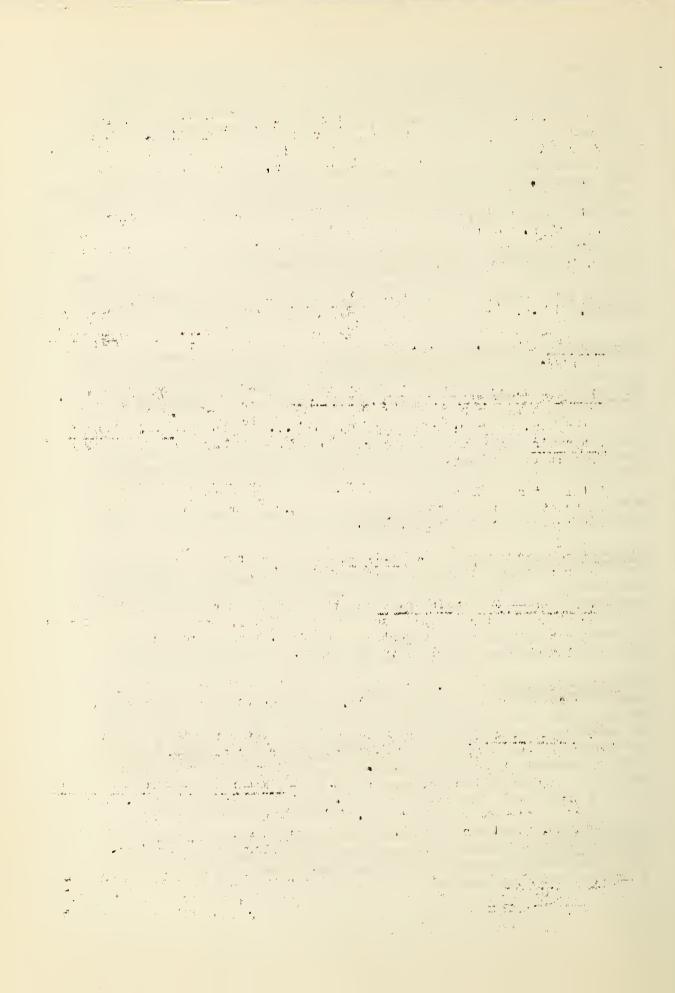
Outlook for water in the Bully Creek area is satisfactory with a snow cover that is good but not excossively heavy.

Willow Creek Reservoir No. 3 on Willow Creek is reported to have 3500 acre feet in storage and a snow cover that will provide a satisfactory water supply. It was reported that a now, large artesian well will supplement water supplies in this area.

The Owyhee watershed, larger than the state of Massachusetts, has a snow cover equalling last year's, and about 108 percent average.

The Owyhee Project has an ample supply of water for this season and possibly for the next year with the huge reservoir full and spilling for the first time since 1946. Watershed soils in this drainage area are saturated and discharge of the Owyhee River above Owyhee Reservoir is expected to be about 625,000 a.f. in the next six months. Last year's discharge was about 320,000 a.f. while the 10-year average is 397,000. Holdover in the reservoir next fall is expected to be one of the largest ever experienced in the history of the project.

Jordan Valley lands will have good water supplies this year with Antelope Reservoir reported to contain about 30,000 acre feet at this time. Mid-winter freshets brought much water into this reservoir at an earlier date than usual.



Southcentral Oregon

Irrigated lands of Lake County can expect 1951 water supplies equal to or, in some areas, better than last year. No deficiencies in usual supplies are expected. There is less snow cover this year in the lower elevations, but the snow depth and water content at the higher elevations more than makes up for this deficiency. Soils are well wetted (saturated in places) throughout the region. The northeastern corner of the county is slightly drier but still in good condition.

Lands in Silver Lare Valley will have excellent water supplies this year, probably be med than last year, with Thompson Valley reservoir reported as full and heavy runoff already underway. Summer Rim snow course has 20.5 inches of water in the snow compared with 20.4 last year and the watersheds are very wet.

Summer Lake Basin gcts its water almost entirely from springs which should discharge fully as much water this year as last, probably more.

Chewaucan River near Psialey is forecast to discharge 80,000 acre feet compared with 67,200 last year in the three months April-June. The 10-year average discharge is 61,800 a.f.

Total inflow to Albert Lake between about November 11, 1950 and March 31, 1951 is reported to have increased the lake by 2.8 feet of water in depth. This would largely have come from the Chewaucan River.

The Goose Lake Basin has a snow cover 78 percent of last year and 119 percent average. The wetness of watershed soils is expected to add sufficiently to the expected flow of streams and make the water supplies equal to or better than those of last year.

Drew Reservoir has 63,000 acre feet in storage and is spilling at the rate of better than 400 c.f.s. Much more runoff is yet to come into this reservoir.

Cottonwood Reservoir is reported to have 2,870 acre feet in storage on the 1st of April with more coming all the time. The reservoir should fill.

Crane Creck and other small streams of the Goose Lake Valley, both on the West and East sides, are expected to discharge as much or more water than last year, and will sustain their flow longer this season.

Water supplies for Warner Valley lands will be equal to or somewhat better than last year. Flow of Deep Creek above adel is forceast at 75,000 acre feet, april through June, compared with 70,300 last year and the 10-year average flow of 60,400. Twenty-mile and Honey Creeks should both have flows equal to last year or better. Hart Lake is full and bogan spilling about March 31.

Hart Mountain Antelope Refuge was reported to be very dry up to early March, as was the area north and cast of there. However, March storms have reversed the outlook and water supplies now seem to be better than

-1

average with most water holes filled. It is thought, however, that the west slope of Hart Mountain will furnish very little water this year due to snow blowing up and over the crest.

Guano Valley seems to be wetter than the Hart Mountain area and is thought to have water supplies about the equal of last year or better. Bald Mountain snow course over the line in California reports only 1.3 inches of water in the snow on April 1 compared with 2.0 inches last year and an 11-year average of 2.9 inches of water.

Southern Oregon

Water supplies for irrigated lands of Klamath, Jackson, Josephine and Douglas counties will be generally good this year except for the Illinois and Applegate River regions where late season shortages will definitely occur.

Mountain snow cover in the Klamath Basin is 94 percent of last year and 120 percent average with extra deep snows at higher elevations and little or no snow remaining at lower elevations. Extremely wet or saturated soils on the watersheds will contribute greatly to a good streamflow.

Sprague River near Chiloquin is expected to discharge 230,000 acre feet compared with 184,000 in 1940 for the six months april through September. This will be 104 percent average. The 1948 discharge was 239,900 a.f.

Williamson River below Sprague River, the principal feeder for Upper Klamath Lake, is forecast to discharge 350,000 acre feet compared with 320,600 in 1949 and the 10-year average of 360,600 or 97 percent average.

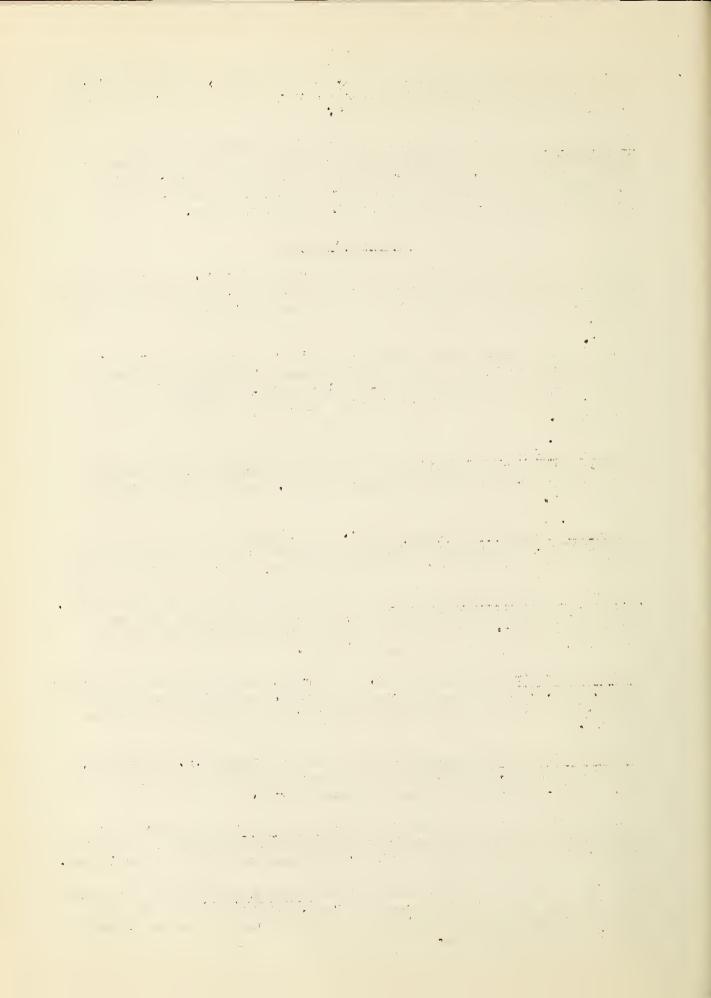
Not Inflow to Upper Klamath Lake is forecast at 480,000 acre feet compared with 423,100 last year and 463,600 a.f., the average for the ten years 1940-49. Water has been spilled for some time to prevent rise of the lake level above agreed limits.

Gerber Reservoir, with 57,560 a.f. in storage, should receive an additional 24,000 a.f. inflow April through September. This six month's flow was 14,700 last year compared with the average of 17,600 for 10 years 1940-49.

Inflow to Clear Lake Reservoir, which now has 139,280 a.f. in storage, is forecast at 39,000 a.f. for the six months compared with 33,500 last year and 39,000 average for the 10 years 1940-49.

Satisfactory water sup plies for the Klamath Project are assured for the season and smaller reservoirs throughout Klamath County are reported full or will fill, setting a satisfactory base for good water conditions.

Snow cover in the watersheds of the main Upper Rogue River is 93 percent of last year and about 120 percent average, assuring streamflow well above average. Watershed soils are all well saturated and the ground is not frozen under the snow.



Rogue River, North Fork above Prospect is predicted to discharge 350,000 acre feet April through September or 122 percent of the 10-year average 1940-49, as compared with 387,600 last year and 375,500 in 1949. About 290,000 of this will be measured in the first four months, April-July.

Rogue River, Middle Fork plus Power Canal will discharge 85,000 a.f. or 120 percent of average. The 1949 flow was 91,100 and in 1948 it was 83,100 a.f.

Gaging station at Rogue River, South Fork, above Imnaha Creek has been discontinued and replaced by a station below Imnaha Creek. Flow of the stream at the former station is expected to be 60,000 a.f. this season compared with 80,200 in 1949 and an average of 52,800 for ten years. Addition of the flow of Imnaha Creek to this figure should equal the discharge at the new station.

Flow of the main Rogue River below South Fork is forecast at 750,000 acre feet or 121 percent of the 1940-49 average of 623,100 acre feet. Flow in 1949 was 790,800 and in 1948 it was 732,500.

Further downstream the flow of Rogue River at Grants Pass is expected to be 950,000 acre feet compared with 975,000 in 1949 and 1,138,100 in 1948. The 10-year average discharge is 808,200 acre feet.

Water supplies for the Grants Pass Irrigation District will be satisfactory this year since low flow of the river is not expected to drop below 1000 second feet at the diversion dam at Savage Rapids. Alternation of pumping into the district's canals begins only when the river drops to 870 second feet.

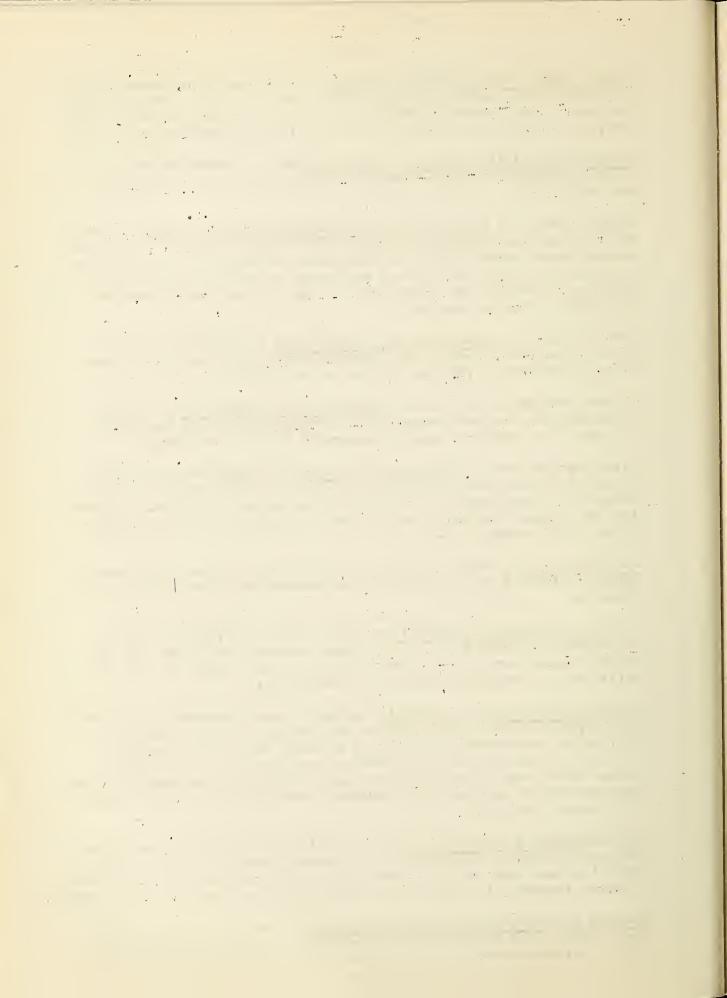
Bear Creek Valley lands will have adequate water supplies this year if normal conditions of precipitation and temperature prevail during the summer .

The Talent Irrigation District now has a total of 15,000 acre feet of stored water - about 6,750 a.f. in Hyatt reservoir and 8,342 a.f. in Emigrant reservoir, which is full. This is nearly 3000 acre feet more water than was available last year at this date.

Inflow to Hyatt Prairie Reservoir during the next six months is forecast to be 4,200 acre feet compared with the 10-year average of 5,500. The 1949 inflow was measured at 7,600 a.f. Total water that will likely be available to the Talent district is about the same as last year. Normal spring and summer rains will make it possible for average irrigation practice to be followed. Subnormal precipitation will mean some late season shortages.

Flow in McDonald Creek Canal, which gets its water from the west slope of Wagner Butte; is expected to be of shorter duration than last year since the snow pack at Wagner Butte snow course contains only 13.7 inches of water compared with 21.7 inches last year and an average of 17.1 inches.

Medford and Rogue River Irrigation Districts draw their storage water from Fourmile and Fish Lake reservoirs where storage is now 12,500 and 6,100 a of o, respectively. This is 6,000 a of o more storage than was available at the same date last year.



Inflow to Fourmile Lake is expected to be an additional 7,000 a.f. which will more than fill this reservoir. The 10-year average inflow is 7,500 a.f. and the 1949 discharge was 8,500.

Fish Lake Inflow is best indicated by the gaging station at North Fork Little Butte Creek (corrected for storage changes) and is forecast to be 13,200 a.f. during the April-September period. This flow will be 98 percent of the 10-year average, but not as great as the 18,900 measured in 1949.

Total water available to the Medford and Rogue River Irrigation Districts should be about 39,000 a.f., an amount which will be adequate for this season's irrigation program.

Eagle Point Irrigation District will, as usual, have good water supplies with a good water reserve in the snow cover on that watershed. Low elevation snow is notably absent this year, but water content of the higher elevation snow is heavy as indicated at Seven Lakes Basin where 72.4 inches of water as measured in the snow compared with 74.5 last year and 55.8 inches as a fifteen year average.

Snow cover in the Applegate and Illinois River watersheds is poor this year, being reported as 71 and 46 percent of last year, respectively. Compared to average, this year's snow cover is 86 and 64 percent, respectively.

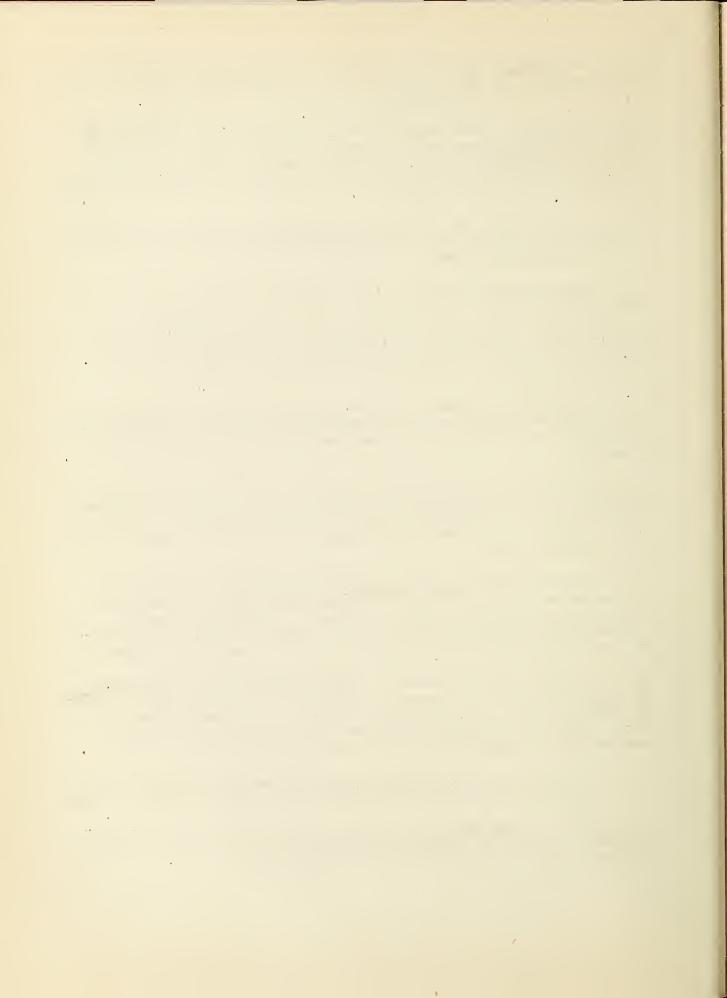
Applogate River near Ruch is forecast to discharge 85,000 a.f. or 76 percent average auring the April-September period. In 1949 the discharge was 118,400 a.f. during this six month period. Regulation of water will likely begin at a much earlier date this year than at any time for the past several years.

Water conditions on the Illinois River are much poorer than last year with water content of the snow at Althouse course only 1.6 inches on April 1 compared with 14.5 inches last year. Average water content for the past 14 years has been 7.0 inches. Only abnormal precipitation can prevent serious water shortage in the latter part of the season.

Crop land and watershed soils of the Evans Creek, Grave Creek and Jump-Off Joe Creek area are in excellent condition, but low elevation snow cover is lacking and only a small amount of snow remains on the higher areas. Water supplies will probably fall short of those received last year, but good summer rains can alleviate this condition.

Watershed snow cover in the Umpqua Basin is 84 percent of last year, but 122 percent of average with heaviest accumulations in the high elevations.

Flow of North Umpqua River below Lake Creek is predicted for the April-September period to be 165,000 acre feet or 107 percent of the 10-year average of 154,200. The 1949 flow was 183,000 a.f.



Clearwater River above Trap Creek is forecast to discharge 64,000 a.f. compared with an average of 59,800 and a 1949 discharge of 71,800 a.f.

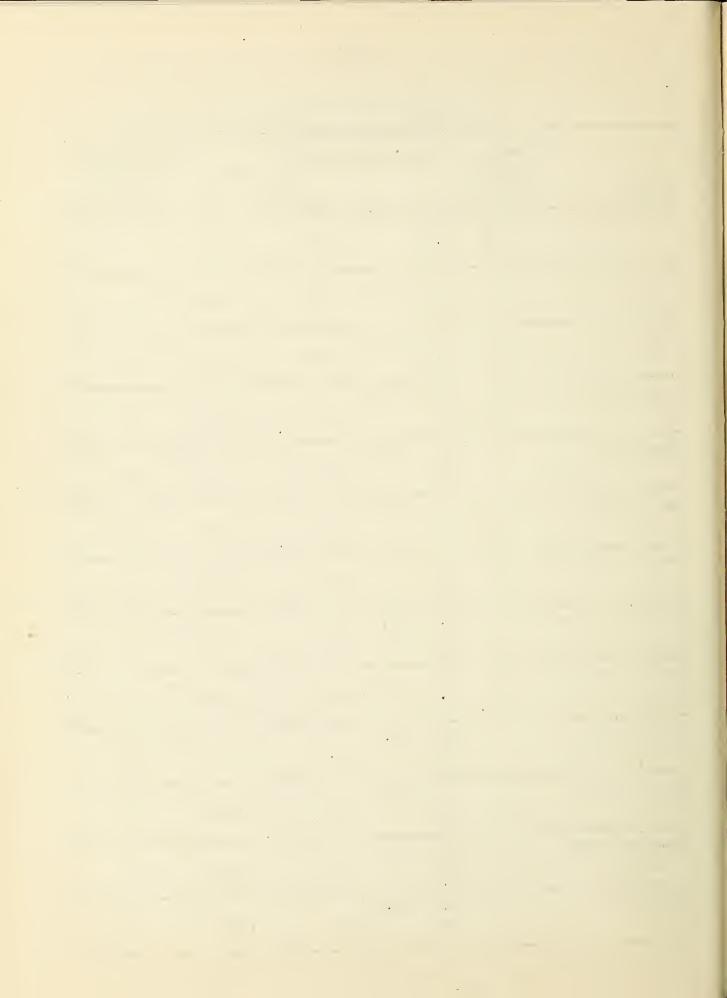
Willamette Valley watersheds have a heavy snow pack averaging 115 to 194 percent average, but only 64 to 82 percent of last year. Streamflow for the section months April through September will be 125 to 132 percent of the 10-year average 1940-49. For forecasts of these streems see page 3 and 4.



Appendix A

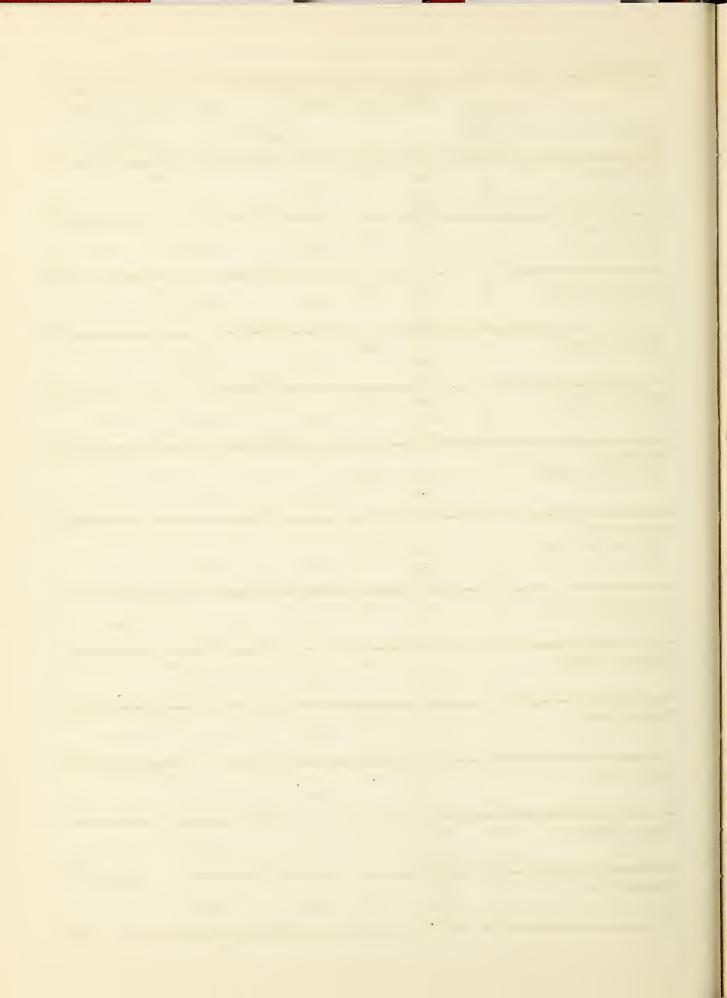
STATUS OF SNOW COVER AS OF APRIL FIRST Summary of Snow Survey Data By Watersheds as of About April First

| Malheur River | | By Wat | | | | April F | | 267 6 | Om Otto 300 | +02 |
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| Stream Courses Averaged 1951 1950 1949 record of of that in Averaged 1951 1950 1949 record of of that in Office 1950 1849 Avg. Owyhee River 17 9.6 9.1 12.5 (2-23) 77 105 Malhour River 6 9.1 10.9 12.4 (6-21) 38 118 Burnt River 3 8.9 11.4 (6-21) 38 118 Burnt River 3 8.9 11.4 (6-16) 79 118 Burnt River 7 20.9 23.0 91 11.2 (6-16) 79 107 Powder River 7 20.9 23.0 19.9 18.7 101 Pine Creek 1 30.8 30.4 1 30.8 30.4 1 30.8 10.8 108 Immaha River 2 37.5 39.0 28.6 (31) 78 108 Immaha River 2 37.5 39.0 34.6 (9-17) 108 Grande Ronde River 10 20.8 23.8 23.8 23.8 112.9 19.6 (4-22) 80 107 Walla Walla River 1 28.7 32.5 12.2 (12-22) 67 109 Walla Walla River 5 14.2 17.5 12.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.9 10.3 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.5 12.9 10.3 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 | | Alumbon | | | | | | | | |
| Stream | | | BHOI | w cover | (Indue | | T ILR. | | | |
| Basin Averaged 1951 1950 1949 record 568 1050 1249 Avg. Owyhee River 17 9.6 9.1 12.5 9.1 175 77 105 Halheur River 6 9.1 10.9 12.4 (6-21) 38 118 Burnt Fiver 3 8.9 11.4 77 78 78 118 Burnt Fiver 7 20.9 23.0 6-16) 79 107 Fowder River 7 20.9 23.0 91 107 107 Fowder River 7 20.9 23.0 91 107 107 Fowder River 7 20.9 23.0 19.9 (3-15) 91 107 Fowder River 1 30.8 30.4 19.9 (3-15) 91 122 Pine Creek 1 30.8 30.4 10.1 101 107 108 108 Immaha River 2 37.5 39.0 | Stream | | | | | | OT | | | |
| 17 9.6 12.5 (2-23) 77 105 | | | 1951 | 1950 | 1949 | | | | | |
| 17 9.6 | Owyhee River | 17 | 9.6 | 9.1 | | , | | 175 | | |
| Malheur River 6 9.1 10.9 85 85 88 118 Burnt Fiver 3 6.9 11.4 7.7 (6-21) 88 118 Burnt Fiver 3 8.9 11.4 7.7 (6-21) 78 79 107 Powder River 7 20.9 23.0 8.3 10.7 Powder River 7 20.9 23.0 91 (3-15) 91 122 Pine Creek 1 30.8 30.4 19.9 (3-15) 91 122 Pine Creek 1 30.8 30.4 28.6 (13) 78 108 Immahe River 2 37.5 39.0 28.6 (13) 78 108 Grande Ronde River 10 20.8 23.8 28.6 (9-17) 108 Grande Ronde River 10 20.8 23.8 10 22.5 28.0 (4-22) 80 107 Walla Walla River 1 28.7 32.5 44.5 (20) 64 105 Umatilla River 5 14.2 17.5 5 14.2 7.4 (20) 64 105 Umatilla River 5 14.2 17.5 5 14.2 12.2 (12-22) 67 109 Willow Creek 1 12.9 16.0 12.9 10.3 12.5 John Day River 14 12.9 16.0 12.9 10.3 12.5 John Day River 14 12.2 14.1 12.9 10.3 12.5 Deschutes River 11 37.8 41.3 9 39.7 43.7 (1-22) 91 12.7 Crooked River 4 10.8 12.2 43.7 29.7 Crooked River 4 10.8 12.2 29.7 Crooked River 4 10.8 12.2 89.7 | ongree reares | | | | 12.5 | | (2-23) | | 77 | |
| Burnt River 3 8.9 11.4 7.7 6-21) 88 Burnt River 3 8.9 11.4 (6-21) 78 3 8.9 11.2 (6-16) 79 3 8.9 11.2 (6-16) 79 7 18.1 19.9 (3-15) 91 112 Pine Creek 1 30.8 30.4 101 1 30.8 39.6 (13) 78 1 30.8 28.6 100 Immaha River 2 37.5 39.0 28.6 (9-17) 108 Grande Ronde River 10 20.8 23.8 23.3 116 Grande Ronde River 10 20.8 23.8 28.0 (4-22) 80 11 20.9 19.6 88 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 14.2 (20) 64 1 12.9 16.0 10.3 12.5 John Day River 14 12.2 17.5 14.2 (22) 80 1 12.9 16.0 10.3 12.5 John Day River 14 12.2 14.1 13.9 16.0 10.3 12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5 | | | | | | | | | | 105 |
| S | Malheur River | 6 | 9.1 | 10.9 | | | | 83 | | |
| Burnt Fiver 3 8.9 11.4 1.2 (6-16) 78 79 107 Powder River 7 20.9 23.0 91 (3-15) 91 112 Pine Croek 1 30.8 30.4 101 78 108 1 30.8 30.8 28.6 (13) 78 108 Imnaha River 2 37.5 39.0 28.6 (9-17) 108 22.5 37.5 32.3 116 Grande Ronde River 10 20.8 23.8 10 22.5 28.0 (4-22) 80 11 20.9 19.6 (20) 64 10.5 11 20.9 19.6 (20) 64 10.5 11 20.9 19.6 (20) 64 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5 | | | | | 12.4 | | (6-21) | | 38 | |
| Sample S | | 6 | 9.1 | | | 7.7 | | - | | 118 |
| Powder River 7 20.9 23.0 19.9 (3-15) 91 7 18.1 19.9 (3-15) 91 112 Pine Creek 1 30.8 30.4 1 30.8 39.6 (13) 78 108 Immaha River 2 37.5 39.0 2 37.5 32.3 116 Grande Ronde River 10 20.8 23.8 10 22.5 28.0 (4-22) 80 11 20.9 19.6 108 Walla Walla River 1 28.7 32.5 44.5 (20) 64 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 27.4 105 Umatilla River 5 14.2 17.5 27.4 105 Umatilla River 1 12.9 16.0 1 10.3 125 John Day River 14 12.2 14.1 12.9 10.3 125 Deschutes River 11 37.8 41.3 9 39.7 11 37.8 41.3 9 39.7 11 37.8 41.3 29.7 (1-22) 91 127 Crooked River 4 10.8 12.2 29.7 29.7 127 Crooked River 4 10.8 12.2 29.7 29.7 127 Crooked River 4 10.8 12.2 29.7 29.7 127 | Burnt River | 3 | 8.9 | 11.4 | | | | 78 | | |
| Powder River 7 20.9 23.0 19.9 (3-15) 91 112 Pine Creek 1 30.8 30.4 101 13 78 108 Immaha River 2 37.5 39.0 28.6 (13) 78 108 Grande Ronde River 10 20.8 23.8 10 22.5 28.0 (4-22) 80 11 28.7 27.4 105 Umatilla River 5 14.2 17.5 5 14.2 12.9 16.0 1 12.9 16.1 12.9 10.3 12.5 12.5 12.2 12.2 12.2 12.2 12.2 12.2 | | 3 | 8.9 | | 11.2 | | (6-16) | | 79 | |
| The Creek | | 3 | 8.9 | | degenskliger starmitärskelijke ders | 8.3 | | | | 107 |
| Pine Creek 1 30.8 30.4 39.6 (13) 78 108 1 30.8 28.6 (13) 78 108 Immaha River 2 37.5 39.0 28.6 (9-17) 108 2 37.5 39.0 34.6 (9-17) 108 Crande Ronde River 10 20.8 23.8 28.0 (4-22) 80 107 Walla Walla River 1 28.7 32.5 44.5 (20) 64 105 Umatilla River 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 67 5 14.2 17.5 21.2 (12-22) 80 1 12.9 10.3 12.5 John Day River 14 12.2 14.1 14.2 (4-22) 89 18 Deschutes River 11 37.8 41.3 29.7 (1-22) 91 12 7 Crooked River 4 10.8 12.2 88 4 10.8 12.2 88 | Powder River | 7 | 20.9 | 23.0 | | | | 91 | | |
| Pine Creek 1 30.8 30.4 39.6 (13) 78 108 1 30.8 28.6 (13) 78 108 Immaha River 2 37.5 39.0 28.6 (9-17) 108 2 37.5 32.3 116 Grande Ronde River 10 20.8 23.8 28.0 (4-22) 80 107 Walla Walla River 1 28.7 32.5 28.0 (4-22) 80 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 27.4 (12-22) 67 5 14.2 17.5 14.2 13.0 109 Willow Creek 1 12.9 16.0 1 12.9 10.3 12.5 John Day River 14 12.2 14.1 13.9 10.3 12.5 John Day River 14 12.2 14.1 13.0 (4-22) 89 12.6 (4-22) 89 12.7 29.7 14.2 20.3 10.3 12.5 Deschutes River 1 37.8 41.3 9 39.7 12.7 Crooked River 4 10.8 12.2 88 12.6 (7-22) 86 Crooked River 4 10.8 12.2 88 10.8 12.6 (7-22) 86 | | 7 | | | 19.9 | | (3-15) | | 91 | |
| Imnaha River 2 37.5 39.0 2 37.5 39.0 2 37.5 32.3 96.0 Grande Ronde River 10 20.8 23.8 10 22.5 11 20.9 19.6 4-22) 80 107 Walla Walla River 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 27.4 105 Umatilla River 1 12.9 16.0 1 12.9 16.0 1 12.9 16.0 1 12.9 16.0 1 12.9 16.0 1 12.9 16.0 1 12.9 16.0 1 12.9 16.0 1 12.9 10.3 12.5 John Day River 14 12.2 14.1 13 12.7 14.2 (4-22) 89 10.3 125 Deschutes River 11 37.8 41.3 93.7 (1-22) 91 127 Grooked River 4 10.8 12.2 4.16 (7-22) 86 | | 8 | 21.0 | · | | 18.7 | | | · · · · · · · · · · · · · · · · · · · | 112 |
| Imnaha River 2 37.5 39.0 2 37.5 34.6 2 37.5 32.3 116 Grande Ronde River 10 20.8 23.8 10 22.5 11 20.9 19.6 88 1 28.7 32.5 (20) 64 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 21.2 (12-22) 67 5 14.2 21.2 (12-22) 67 5 14.2 12.9 16.0 81 1 12.9 16.1 (22) 80 1 12.9 16.0 81 1 12.9 16.1 (22) 89 1 12.9 16.0 81 1 12.9 16.1 (22) 89 1 12.5 John Day River 14 12.2 14.1 12.2 14.1 1 37.8 41.3 9 39.7 14.2 10.3 12.5 Crooked River 4 10.8 12.2 88 6 (7-22) 86 Crooked River 4 10.8 12.2 88 Crooked River 4 10.8 12.2 88 8 88 Crooked River 4 10.8 12.2 88 Crooked River 4 10.8 12.2 88 End 1 12.9 88 End 1 12.0 88 End 1 12.0 89 End End End End End End End En | Pine Creek | 1 | 30.8 | 30.4 | | | | 101 | | |
| Immaha River 2 37.5 39.0 96 2 37.5 34.6 (9-17) 108 2 37.5 32.3 116 Grande Ronde River 10 20.8 23.8 28.0 (4-22) 80 10 22.5 28.0 19.6 20.0 80 107 Walla Walla River 1 28.7 32.5 44.5 (20) 64 64 1 28.7 44.5 27.4 105 64 105 Umatilla River 5 14.2 17.5 81 81 105 Willow Creek 1 12.9 16.0 81 80 129 109 Willow Creek 1 12.9 16.1 (22) 80 125 John Day River 14 12.2 14.1 87 89 125 John Day River 11 37.8 41.3 9.39.7 10.3 9.39.7 125 Crooked River 4 10.8 12.2 88 88 68 | | 1 | | | 39.6 | | (13) | | 7 8 | |
| 2 37.5 34.6 (9-17) 108 106 107 108 108 109 1 | | 1 | 30.8 | ····· | | 28.6 | | | | 108 |
| Crande Ronde River | Imnaha River | | | 39.0 | | | | 96 | | |
| Grande Ronde River 10 20.8 23.8 23.8 28.0 (4-22) 80 107 Walla Walla River 1 28.7 32.5 44.5 (20) 64 105 Umatilla River 5 14.2 17.5 81 5 14.2 21.2 (12-22) 67 5 14.2 13.0 109 Willow Creck 1 12.9 16.0 16.1 (22) 80 125 John Day River 14 12.2 14.1 13 12.9 10.3 87 125 Deschutes River 11 37.8 41.3 9 39.7 43.7 (1-22) 91 127 Crooked River 4 10.8 12.2 4.0 12.6 (7-22) 86 | | | | | 34.6 | | (9-17) | | 108 | |
| 10 22.5 28.0 (4-22) 80 107 | | 2 | 3 7 .5 | | | 32.3 | , | ··· | | 116 |
| 11 20.9 19.6 107 108 107 108 108 107 108 | Grande Ronde River | | | 23.8 | | | | 87 | | |
| Walla Walla River 1 28.7 32.5 44.5 (20) 64 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 81 5 14.2 21.2 (12-22) 67 5 14.2 13.0 109 Willow Creek 1 12.9 16.0 81 1 12.9 16.1 (22) 80 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 9 39.7 43.7 (1-22) 91 127 Crooked River 4 10.8 12.2 88 4 10.8 12.2 88 | | | | | 28 •0 | | (4-22) | | 80 | |
| 1 28.7 44.5 (20) 64 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 81 5 14.2 17.5 13.0 109 Willow Creek 1 12.9 16.0 81 1 12.9 16.1 (22) 80 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 9 39.7 43.7 (1-22) 91 13 37.8 29.7 29.7 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | · · · · · · · · · · · · · · · · · · · | 11 | 20.9 | | - | 19.6 | ·*·· | | | 107 |
| 1 28.7 27.4 105 Umatilla River 5 14.2 17.5 81 5 14.2 21.2 (12-22) 67 5 14.2 13.7 109 Willow Creek 1 12.9 16.0 81 1 12.9 16.1 (22) 80 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 29.7 91 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | Walla Walla River | | | 32.5 | | | , | 88 | | |
| Umatilla River 5 14.2 17.5 81 5 14.2 17.5 81 5 14.2 13.7 109 Willow Creck 1 12.9 16.0 81 12.9 16.1 (22) 80 125 John Day River 14 12.2 14.1 87 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 91 12.7 12.7 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | | | | 44.5 | | (20) | | 64 | |
| 5 14.2 21.2 (12-22) 67 5 14.2 13.7 109 Willow Creck 1 12.9 16.0 81 1 12.9 16.1 (22) 80 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 91 9 39.7 43.7 (1-22) 91 11 37.8 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | - | 28.7 | | | 27.4 | | | | 105 |
| 5 14.2 13.0 109 Willow Creek 1 12.9 16.0 81 1 12.9 16.1 (22) 80 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 91 9 39.7 43.7 (1-22) 91 11 37.8 29.7 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | Umatilla River | | | 17.5 | | | | | | |
| Willow Creek 1 12.9 16.0 81 1 12.9 16.1 (22) 80 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 91 9 39.7 43.7 (1-22) 91 11 37.8 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | | | | 21.2 | | (12-22) |) | 67 | |
| 1 12.9 16.1 (22) 80 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 91 11 37.8 29.7 (1-22) 91 27 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | - | 5 | 14.2 | | | 13.7 | | | | 109 |
| 1 12.9 10.3 125 John Day River 14 12.2 14.1 87 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 91 11 37.8 29.7 (1-22) 91 11 37.8 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | Willow Creek | | | 16.0 | | | | 81 | | |
| John Day River 14 12.2 14.1 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 9 39.7 43.7 (1-22) 91 11 37.8 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | | | | 16 •1 | | (22) | | 80 | |
| 13 12.7 14.2 (4-22) 89 14 12.2 10.3 118 Deschutes River 11 37.8 41.3 91 11 37.8 29.7 (1-22) 91 11 37.8 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | 1 | 12,9 | · · · · · · · · · · · · · · · · · · · | | 10.3 | | | · | 125 |
| Deschutes River 11 37.8 41.3 91 91 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | John Day River | | | 14.1 | | | | 87 | | |
| Deschutes River 11 37.8 41.3 91 91 127 9 39.7 43.7 (1-22) 91 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | | | | 14.2 | | (4-22) | | 89 | |
| 9 39.7 43.7 (1-22) 91 11 37.8 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | 14 | 12.2 | | | 10.3 | | - | | 118 |
| 11 37.8 29.7 127 Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | Deschutes River | | | 41.3 | | | | 91 | | |
| Crooked River 4 10.8 12.2 88 4 10.8 12.6 (7-22) 86 | | | | | 43.7 | | (1-22) | | 91 | |
| 4 10.8 12.6 (7-22) 86 | | 11 | 37.8 | | - | 29.7 | | | | 127 |
| (, , , , , , , , , , , , , , , , , , , | Crooked River | | | 12.2 | | | | 88 | | |
| 4 17.8 9.1 119 | | | | | 12.6 | | (7-22) | | 86 | |
| | | 4 | 10.8 | | | 9.1 | | | | 119 |



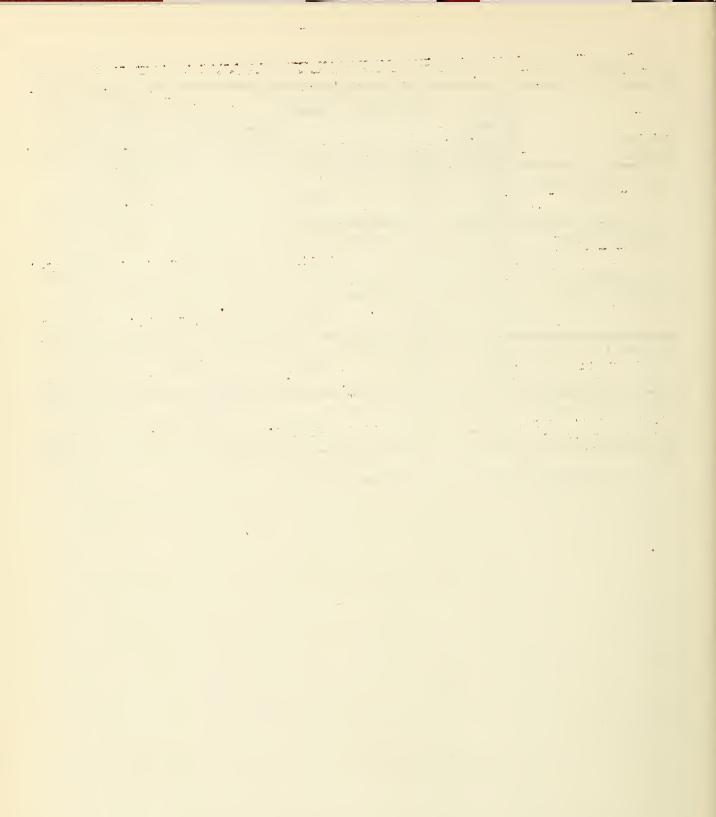
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| (Continued) | - | Avera | ga Wate | er Depth | in | 1951 | Snow Wa | ter |
|--|-------------|----------------|-------------|--------------|-------------|---------------------------------------|-------------|------|
| | Number | | _ | (Inches | | Yrs. Dept | th (Inch | cs) |
| | of Snow | | | Ā | vg.Past | | s percen | |
| Stream | Courses | | | | rs. of | | f that i | |
| Basin | Averaged | 1951 | 1950 | 1949 | record | ord 1950 | 1949 | Avg. |
| Hood River | 2 | 35.8 | 51.6 | | | 69 | | |
| | 2 | 35.8 | | 39.1 | | (3-18) | 91 | • |
| | 2 | 35.8 | | | 35.0 | | | 102 |
| Sandy River | 3 | 44.2 | 51.8 | | | 85 | | |
| · | 3 | 44.2 | | 59.3 | | (14-19) | 84 | |
| | 3 | 44.2 | | | 32.7 | | | 135 |
| Clackamas River | 2 | 25.0 | 31.5 | | | 79 | | |
| | 2 | 25.0 | | 34.3 | | (10-14) | 73 | |
| | 2 | 25.0 | | | 12.6 | | | 194 |
| Santiam Rivers | 3 | 35.2 | 44.9 | | | 78 | | |
| | 4 | 28.6 | | 39.7 | | (7-13) | 72 | |
| | 4 | 28.6 | | | 20.0 | 、 - , | | 142 |
| McKenzie River | 3 | 46.0 | 55.9 | | | 82 | | |
| FIOROIDED REVOL | 3 | 46.0 | 00.0 | 61.5 | | (10-13) | 75 | |
| | 3 | 46.0 | | 0 V 0 | 35.0 | (10 10) | | 131 |
| Coast Fork | | | | <u> </u> | | | | |
| Willamette River | 1 | 29.8 | 46.9 | | | 64 | | |
| 1,2220110 000 1(1702 | ī | 29.8 | 1000 | 42.8 | | (12) | 70 | |
| | ī | 29.8 | | -200 | 26.0 | (== / | | 115 |
| Middle Fork | **** | | | | ***** | | | |
| Willamette River | 4 | 40.0 | 49.5 | | | 81 | | |
| ., | 3 | 39.8 | | 46.8 | | (7-21) | 85 | |
| | 4 | 40.0 | | | 30.5 | | | 131 |
| Silver Lake Basin | 1 | 0.0 | 0.0 | | | 100 | | |
| | ī | 0.0 | | 0.0 | | | 100 | |
| | 1 | 0.0 | | | 0.7 | (10) | | 0 |
| Chewaucan River | 3 | 10.3 | 11.9 | | | 87 | | |
| | 3 | 10.3 | | 11.9 | | (12-20) | 87 | |
| | 3 | 10.3 | | | 8.8 | | | 117 |
| Warner Lake | 1 | 12.7 | 12.0 | | # | 106 | | |
| | ì | 12.7 | U | 14.5 | | (12) | 88 | |
| | î | 12.7 | | | 9.4 | (/ | | 135 |
| Guano Lake | 1 | 1.3 | 2.0 | ********** | | 65 | | |
| OADH OHDD | 1 | 1.3 | 2.0 | 9.1 | | (11) | 14 | |
| | î | 1.3 | | 0.47 | 2.9 | · · · / | • | 45 |
| Harney Basin | | 11.5 | ון ב | | | 100 | | |
| nar ney bas m | 8 7 | 13.2 | 11.5 | 11.5 | | (7-20) | 115 | |
| | 8 | 11.5 | | 11.0 | 8.9 | (1 20) | 110 | 129 |
| The same of the sa | | | 75 7 | | | | | |
| Umpqua River | 6 6 | 31 •1 | 37 •1 | 3E 77 | | 84 (3-22) | 07 | |
| | 6 6 | 31 •1 31 •1 | | 35.7 | 25.5 | (0-22) | 87 | 122 |
| | - | OT #T | | · ····· | £0 +0 | · · · · · · · · · · · · · · · · · · · | | 122 |



| Chuson | Number of Snow | Average Snow (| | Depth Inches |) Avg. past | | Dept: | Snow V h (Inc | hes) ont |
|--------------------|---------------------|----------------------|-------|-----------------|-------------------|-------------|-------|------------------|-------------|
| Stream Basin | Courses Averaged | 1951 | 1950 | 1949 | yrs, of record | Rec- ord | 1950 | that 1949 | Avg• |
| Upper Rogue River | 15 15 15 | 26°0 25:0 26:0 | 31 •4 | 34.3 | 24.7 | (5-20) | 83 | 76 | 105 |
| Applegate River | 5 5 5 | 20-3 20-3 20-3 | 28.7 | 35.1 | 23.6 | (9-16) | 71 | 58 | 86 |
| Illinois River | 2 2 2 | 10.2 10.2 10.2 | 22 •2 | 22.0 | 16.0 | (14-15 | 46 | 46 | 64 |
| Klamath Lake Basin | 21* 21* 21* | 17.9 17.9 17.9 | 19.2 | 20.7 | 14.9 | (7-24) | 93 | 86 | 120 |
| Goose Lake Basin | 33: 33 34: | 7.5 7.5 7.5 | 9.4 | 12.4 | 6 = 2 | (12-20 | 80 | 60 | 121 |

^{*} Including Copco water measurement stations



| State Sec. Twp. Mange Elev. |
|-----------------------------|

| | | | U P P | লা | O T O | MBIA | DRAI | N A G E | | | | |
|-----------------------|--------|----|-------|----------|-----------------|-------|--------|----------|------|--------------|----|----------|
| | | | L | 조 (전) | \[\frac{1}{2}\] | N H H | OREG | NI O | | | | |
| OWYHEE RIVER | | | | ! ! | l I | | | ! | | | | |
| Big Bend | Nev.6 | 30 | 45N | 56臣 | 6700 | 3-28 | 34.9 | 12.5* | 12.7 | 15.2 | 23 | ် (၁) |
| Disaster Peak | Nev.6 | ∞ | 47N | 34E | 6500 | 4-1 | 27.4 | 1005 | 7.2 | 14.4 | ≈ | 10.8 |
| Fry Canyon | Nev.7 | 31 | 43M | 54正 | 6800 | 3-29 | 24.5 | 10.2* | 8.8 | 15.0 | 10 | 8.6 |
| Gold Cr.Ranger Stn. | Nev.5 | 31 | 45N | 至99 | 0099 | 3-28 | 17.8 | 7.6* | 8.2 | 9.5 | 11 | 6.4 |
| Granite Peak | Nev.4 | 22 | 44N | 39压 | 7800 | 3-31 | 35.3 | 11,0* | 11,9 | ნ ° 8 | 11 | 11.5 |
| Lower Buckskin | Nev.1 | 25 | 45N | 39正 | 0029 | 4-1 | 29.3 | 10.8* | 10,1 | 14.2 | 9 | 8.4 |
| Lower Jack Creek | Mev.9 | 18 | 42N | 53臣 | 6800 | 3-30 | 5.1 | 0.5* | 0•0 | 4.5 | 16 | 4.0 |
| Martin Creek | Nev.3 | 18 | 44M | 40E | 6700 | 4-1 | 16.3 | *0*9 | 8.7 | 8•6 | 10 | 8.4 |
| Midas | Nev.6 | 18 | 39N | 46E | 7200 | 3-31 | H | * E-1 | 0.0 | 8.0 | 27 | 2.4 |
| Rodeo Flat | Nev.8 | 36 | 43N | 53玉 | 0089 | 3-29 | 20.8 | 9.2* | 8.4 | 19.0 | 10 | 10.2 |
| Silver City | Idaho | 9 | 55 | 311 | 6400 | 4-5 | 41.1 | 17.2* | 18,3 | 20.0 | 9 | 11,9 |
| South Mountain No. 2 | Idaho | 35 | 7.5 | 5W | 6340 | No R | Report | | 14.5 | 16,8 | 11 | 11.6 |
| Taylor Canyon | Nev-12 | 35 | 39N | 53图 | 6200 | 3-29 | 0.0 | *0•0 | 0.0 | ာ ့ 8 | 10 | 3.5 |
| Tremewan Ranch | Nev-11 | တ | 25M | 55里 | 2200 | 5-29 | 0.0 | *000 | 0,0 | 4.6 | 6 | 0.5 |
| Upper Buckskin | Nev.2 | I | 45W | 35臣 | 7200 | 4-1 | 23.7 | 8.8* | 8.8 | 9.1 | 15 | 10.8 |
| Upper Jack Creek | Nev.10 | 6 | 42M | 55正 | 7250 | 3-30 | 31.5 | 10.4* | 10.2 | 14.3 | 10 | 10.6 |
| MALHEUR RIVER | | | | | | | | | | | | |
| Barney Creek | 143 | 16 | 14S | 36E | 5950 | 3-29 | 23.5 | 7.3 | 11.6 | 10.8 | 9 | 9.1 |
| Blue Mountain Springs | 133 | 21 | 158 | 35里 | 2 900 | 3-27 | 47.0 | 17.5 | 19.7 | 20.1 | 21 | 14.7 |
| Crane Prairie | 137 | 24 | | 54压 | 5375 | 3-28 | 28.4 | 10.8 | 12,1 | 13.1 | 13 | 8.1 |
| Lake Creek | 136 | 10 | | 33法正 | 5120 | 3-27 | 32.3 | 13.5 | 13.8 | 11.8 | 13 | 9.4 |
| Rock Spring | 134 | 23 | | 52E | 2100 | 3-28 | 15.1 | ຄຸ້ນ | 8•4 | 6.2 | 15 | 4.6 |
| Stinkingwater | 135 | 33 | | 34E | 4800 | 3-31 | 0.0 | 0.0 | E-I | 1 | 12 | 0.5 |

* Telegraphic - Subject to minor revision



| 1951 | - |
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| APRIL, | - |
| SURVEYS, | The state of the s |
| SNOW | |
| OFEGON | The second distribution in which the party is |

| | | LOCATION | TION | | | | | | SHOW CC | VER ME | SHOW COVER MELSUREMENTS | S |
|----------------------|--------|----------|-----------|-------|--------|-----------|--------|------------|--|---|--|---------------|
| DRAINAGE BASIN | | | | | | | | War Tush C | COMTENT (| (In,) | AND PROPERTY OF THE PARTY OF THE PARTY OF THE PARTY. | |
| and | Numbor | | | | | Date | Snow | | A MANAGEMENT OF THE PROPERTY O | STATE OF THE PART | Years | Av. Mater |
| SNOW COURSE | or | | | | | of | Depth | | | | of | Content |
| | State | Sec. | Sec. Twp. | Range | Elev. | Survey | (In.) | 1951 | 1950 | 1949 | Record | (Inches) |
| Darra Darred | | | | | | | | | | | | |
| DOMINI MINER | | | | | | | | | | | | |
| Barnoy Crook | 143 | 16 | 148 | 36E | 2950 | 3-29 | 23.5 | 7.3 | 11.6 | 10.8 | 9 | 9.1 |
| Blue Mountain Summit | 141 | 9 | 128 | 36正 | 5098 | 5-30 | 30 .0 | 9.2 | 12.0 | 10.8 | 16 | 7 •2 |
| Dooley Mountain | 156 | 32 | 118 | 40E | 5430 | 4-2 | 29.5 | 10.1* | 10.5 | 12,0 | 12 | ထို |
| POWDER RIVER | | | | | | | | | | | | |
| Anthony Lake | 155 | 18 | 7.8 | 37E | 7125 | 4-1 | 74.9 | 28,1* | 32.6 | 33.6a | 15 | 27 -5 |
| Bourne | 154 | 33 | 88 | 37E | 5800 | 4-2 | 47.6 | 20°6* | 20.5 | 17.0 | 15 | 15.3 |
| Dooley Mountain | 156 | 32 | 118 | 40E | 5430 | 4-2 | 29.5 | 10.1* | 10.5 | 12.0 | 12 | 8 5 |
| Eilertson Meadows | 151B | 18 | 88 | 28E | 5400 | 3-31 | 58,9 | 14.4 | 14e8 | 15,02 | 13 | 11.3 |
| Gold Center | 249 | 21 | 98 | 36E | 5340 | 4-2 | 34.8 | 1404* | 16.8 | 12.6 | 12 | 11.2 |
| Goodrich Lake | | 34&35 | 83 | 38E | 6775 A | Abt.3-30 | 97.4 | 42.0 | 48.2 | 1 | 63 | 38.1 |
| Summit Springs | 184 | 6 | 68 | 37 E | 0009 | 4-2 | 8.09 | 21,07* | 1 | 24.4 | 14 | 21.4 |
| Taylor Green | 185 | 83 | 68 | 42E | 5740 | 3-30 | 51.5 | 17.1 | 17.9 | 24.7 | 13 | 16.2 |
| PINE CREEK | | | | | | | | | | | | |
| Schncider Meadows | 161 | 35 | 65 | 45E | 5400 | 3-29 | 78.4 | 30.8 | 30.4 | 39.6 | 13 | 28.6 |
| IMMAHA RIVER | | | | | | | | | | | | |
| | 183 | 16 | 48 | 45E | 7480 | 3-31 | 106.1 | 42,3* | 45.3 | 39.2 | 17 | 35.6 |
| Ancroid Lake No. 2 | 183A | 16 | 48 | 45E | 2000 | | 82 • 2 | 31,9* | 32.6 | 29.9 | ග | 29.0 |
| Coverdale | 171 | 22 | ეე დ | 47 E | 4250 | No Report | ort | | i i | 1 | 4 | ့ တ |
| | | | | | | | | | | | | |

a - Partly ostimated
* Tolographic - Subject to minor revision



| and Number SNOW COURSE or State Soc. Tem. Range Flow. (170.) |
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GRANDE RONDE RIVER

| 45 | 16 48 |
|---------|-------|
| 5至 7000 | _ |
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| | 41E 5 |
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DRAINAGE COLUMBIA LOMER

WALLA WALLIA RIVER

| Tollgate | 212 | 32 | 4N | 38臣 | 5070 | 3-30 | 73.3 | 28.7 | 32.5 | 44.5 | 20 | 27.4 |
|-----------------------------------|-----|-------|----|------|------|------|------|------|------|------|----|------|
| ULATILIA RIVER bucklo Mountain | 241 | 33 | 4S | 29压 | 5400 | 3-29 | 34.9 | 12.9 | 16.0 | 16.1 | 22 | 10,3 |
| Emigrant Springs | 222 | 59 | 1N | 35E | 3925 | 3-30 | 13.6 | 4.8 | 8 | 12,1 | 22 | 5.8 |
| riko | 223 | 28 | 38 | 32E | 5050 | 5-29 | 48•4 | 16.2 | 18.3 | 17.3 | 12 | 12.8 |
| | 221 | 24&25 | 15 | 35 E | 4300 | 3-30 | 22.7 | 8,2 | 12.4 | 15.8 | 22 | 8.6 |
| Tollgate | 212 | 32 | 4M | 38E | 5070 | 3-30 | 73.3 | 28.7 | 32.5 | 44.5 | 20 | 27.4 |

a - Partly ostimated
* Tolographic - Subject to minor revision



| | | | TT CAY | A HO | JON ONOW | OREGON SNOW SURVEIS, AFRIL, | | 1221 | S TOTAL | "ETA GENTLON | Sept. Comments of the sept. | , |
|---|---------|----------|--------|-------------------|----------|-----------------------------|----------|--------------|--------------------|--------------------------------|-----------------------------|-------------|
| | | LOCATION | N I | | | | | | ONO! C | L | NEWEN | 2 |
| DRAINAGE BASIN | | | | | | | - | WATER C | WATER CONTENT (In. | $\operatorname{In}_{\bullet})$ | | Past Record |
| and | Number | | | | | Date | Snow . | | Same Approx | oprox. | Years | Av.Water |
| SNOW COURSE | or | | | | | of | Depth | | Date | . T. | of | Content |
| | State | Sec. | Twp | Twp. Range | Elev. | Survey | (In.) | 1961 | 1950 | 1949 | Record | (Inches) |
| | | | | | | | | | | | | |
| WILLOW CREEK | | | | | | | | | | | | |
| Arbuckle Mountain | 241 | 33 | 4S | 29E | 5400 | 3-29 | 34.9 | 12.9 | 16.0 | 16.1 | 22 | 10.3 |
| JOHN DAY RIVER | | | | | | | | | | | | |
| Arbuckle Mountain | 241 | 33 | 48 | 2 9E | 5400 | 3-29 | 34.9 | 12.9 | 16.0 | 16.1 | 22 | 10.3 |
| Beech Creek Summit | 246A | 4 | 128 | 30E | 4800 | 3-28 | 13,3 | 4.2 | 7.3 | 5.1 | 14 | 4.8 |
| Blue Mountain Springs | 133 | 21 | 15.8 | 55E | 2 900 | 3-27 | 47 •0 | 17.5 | 19.7 | 20.1 | 21 | 14.7 |
| Blue Mountain Summit | 141 | 9 | 128 | 36臣 | 5058 | 3-30 | 30.0 | 9 . 5 | 12 •O | 10.8 | 16 | 7.2 |
| Derr | 343 | 14 | 138 | 23臣 | 5670 | 3-29 | 32.5 | 10.9 | 12.7 | 14.7 | 14 | 10.2 |
| Dixie Springs | 244 | 28 | 118 | 34压 | 6650 | 5-28 | 63.9 | 25.1 | 27.0 | 26.8 | . 15 | 23.2 |
| Gold Center | 249 | 77 | 9 8 | 36E | 5340 | 4-2 | 34.8 | 14.4* | 16,8 | 12.6 | 12 | 11.2 |
| Izee Summit | 964 | 28 | 168 | 29E | 5293 | 3-28 | . 26 • 7 | 6 ° 6 | 10,3 | 841 | 15 | 7 • 1 |
| Marks Creek | 344 | 25 | 128 | 15E | 4540 | 3-30 | 9.v7 | Z • 3 | 5.8 | 4.8 | 13 | 3.0 |
| Ocheco Meadows | 341 | 21 | 138 | 20E | 5200 | 3-30 | 34.4 | 12.8 | 14.0 | 15.8 | 22 | 9•1 |
| Olive Lake | 245 | 7 | | $33\overline{2}E$ | 0009 | 3-30 | 58.0 | 20.3 | 21.7 | 26.5 | 15 | 19.2 |
| Schoolmarm | 248 | 28 | 4S | 34E | 4775 | 8-30 | 14.7 | 5.0 | 6.5 | 1 | 4 | 2.7 |
| Snow Mountain | 965 | - | 19.5 | 26E | 6300 | 3-30 | 44.7 | 16.2 | 16.1 | 15.0 | 7 | 14.0 |
| Starr Ridge | 247B | 20 | 158 | 31E | 6150 | 3-28 | 17.9 | 5.5 | 7.1 | 7 • 1 | 15 | 4.5 |
| CROOKED RIVER | | | | | | | | | | | | |
| Derr | 343 | 14 | 138 | 23E | 5670 | 3-29 | 32.5 | 9•01 | 12.7 | 14.7 | 14 | 10.2 |
| Marks Creek | 344 | 25 | 128 | 19臣 | 4540 | 3-30 | 2.6 | 3.3 | 5.8 | 8.4 | 13 | 3.0 |
| Ochoco Meadows | 341 | 21 | 138 | 20 E | 5200 | 3-30 | 34.4 | 12.8 | 14.0 | 15.8 | 22 | 9.1 |
| Snow Mountain | 965 | | 198 | 26E | 6300 | 3-30 | 44. | 16,2 | 16•1 | 15.0 | 7 | 14.0 |
| * Telegraphic - Subject to minor revision | ject to | mino | r rev | ision | | | | | | | | |

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| 1951 |
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| APRIL |
| SURVEYS, |
| SNOW |
| ORFGON |

| | Ţ | LOCATION | No | | | | | - 1 | SHOW COVER MEASUREMENTS | TER MEAS | UREMENT | 0 | 1 |
|--|--------|----------|-----------|--------------|-----------|-------------------|---------------------|----------|-------------------------|----------|------------|----------|---|
| DRAINAGE BASIN | | | | | | | | WATER CO | CONTENT (| (In.) | | | 1 |
| and | Number | | | | | La te | Snow | | | | Years | Av.Water | ı |
| SNOW COURSE | or | | | | | of | Depth | | | | of. | Content | |
| | State | Sec | Sec. Twp. | Range | Elevo | Survey | (Inc) | 1951 | 1950 | 1949 | Record | (Inches) | 1 |
| DESCHUTES RIVER | | | | | | | | | | | | | |
| Caldwell Ranch | 326 | 30 | 218 | 8 | -400 | 3-27 | 34.6 | 13,8 | 17.6 | t | 13 | 7.6 | |
| Cascade Summit | 321 | 7 | 238 | 王9 | 4880 | 3-31 | 95 • 9 | 40 • 6 | 51.3 | 44.9 | 21 | 30.0 | |
| Chemult | 834 | 21 | 27 S | 8臣 | 4760 | 4-1 | 26.4 | 11.0 | 14.2 | 12.8 | 14 | 7.8 | |
| Clear Lake | 361 | 53 | 45 | 9臣 | 3500 | 3-29 | 47.4 | 18.4 | 25.6 | 31.2 | 19 | 13.9 | |
| Crescent Lake | 325 | 11 | 24S | 至9 | 4760 | 3-27 | 58.8 | 24.8 | 20 •5 | 18.0 | 16 | 8 | |
| Hogg Pass | 351 | 24 | 138 | 7 差压 | 4755 | 4-1 | 124.8 | 55.4 | 58.9 | 73.4 | 13 | 41.6 | |
| Irish-Taylor | 329 | 25 | 202 | 王9 | 5500 | 3-29 | 107.6 | 45.0 | 56.8 | 1 | Ч | 56.8 | |
| New Dutchman Flat | 324A | 21 | 185 | 96 | 0079 | 3-28 | 147.7 | 9 8 9 | 67.3 | 69•1 | + | 48•5 | |
| Three Creeks Meadow | 331 | ಬ | 17.5 | 36 | 2600 | 3-28 | 73.1 | 33.4 | 30 • 9 | 34.8 | 22 | 19.7 | |
| Windigo Pass | 744 | 20 | 258 | 日9 | 5800 | 3-27 | 133.8 | 56.1 | 57 • 4 | 9.99 | જ | 52.5 | |
| Willamette Pass | 323 | 21 | 248 | 5 <u>3</u> E | 9099 | 3-27 | 116.3 | 79 €0 | 54.0 | 52.7 | 7 | 39.2 | |
| | | | | | | | | | | | | | |
| HOOD RIVER | | | | | | | | | | | | | |
| Brooks Meadows | 431 | ≈ | 2.8 | 10E | 4300 | 3-27 | 40.0 | 15.4 | 21.9 | 27.7 | 18 | 10.8 | |
| Greenpoint Reservoir | 433 | 28 | 2M | 36 | 3400 | Measuren | Measurement delayed | yed | 31.7° | t I | ~ | 22.6 | |
| Red Hill | 434 | 21 | 18 | 9足 | 4400 | 4-1 | 116.6 | 56.2 | 81.4 | 9°09 | જ | 59.2 | |
| Tilly Jane-Mt. Hood | 432 | 15 | 28 | 36 | 0009 | Measuren | Measurement delayed | yed | 59.1 | 1 | 23 | 50.0 | |
| | | | | | WILLLAMES | WILLAMETTE VALLEY | STREAMS | | 1 | | | | |
| SANDY RIVER | | | | | | | | | | | | | |
| Clear Lake | 361 | 29 | 4S | 36 | 3500 | 3-29 | 47.4 | 18•4 | 25.6 | 31.2 | 19 | 13.9 | |
| Phlox Point-Mt. Hood | 452 | 9 | 38 | 9克 | 2600 | 3-28 | 165 • 6 | 79.47 | 86 4 9 | 100.64 | <u>'</u> 4 | 61.6 | |
| Still Creek | 451 | 22 | 38 | 8完正 | 3700 | 3-28 | 80.8 | 34.5 | 42.8 | 7•9₹ | 77 | 22.7 | |
| a - Partly estimated b - April 13, 1950 | ರ್ಥ | | | | | | | | | | | | |



| | | | | | | | | | | | | | | | - 6 | ** | | | | | | | |
|----------------------|-------------------------|-------------------|-------------|-------------|------------------|-----------------|-------------------|------------|---------------|----------------|-------------|-----------------|--------------|------------------|----------------|--------------|--------------|------------------|------------------------------|----------------|----------|------------|-----------------|
| | TS | Past Record | Avolator | Content | (Inches) | | 14.8 | 13.9 | 19•1 | | 89 80 | 41.6 | 12.0 | 23.0 | | 41.6 | 40.5 | 23.0 | | 30.0 | 26.0 | 26.8 | 39.2 |
| | SHOW COVER MEASUREMENTS | Pa | Toars | of | Record | | 10 | 19 | 14 | | 2 | 13 | 10 | 10 | | 13 | 13 | 10 | | 21 | 12 | 13 | 7 |
| | OVER ME | (11) I | *zo.rda | Date | 1949 | | 30.0 | 31,2 | 38.7 | | 13,6 | 73.4 | 28.7 | 43.2 | | 73.4 | 6.49 | 43,2 | | 44.9 | 42.8 | 1 | 52.7 |
| | SHOW | WATER CONTENT (Tr | Same Approx | Da | 1950 | | 26.8 | 25.6 | 36.2 | | i | 58.9 | 32.8 | 43.1 | | 58.9 | 65.8 | 43.1 | | 51.3 | 46.9 | 45.9 | 54.0 |
| 1981 | | WATER | | | 1951 | | 23,2 | 180G | 26.9 | | 8 | 55.4 | 19.0 | 31.2 | | 55.4 | 51.5 | 31.2 | | 40.6 | 29.8 | 40.6 | 49.0 |
| , APKIL, | | | Snow | Depth | (In_{\bullet}) | | 54.1 | 47.4 | 62.4 | | 25.3 | 124.8 | 45.0 | 9.07 | | 124.8 | 116,7 | 9.07 | | 95 • 9 | 62.8 | 97.5 | 116.3 |
| SNOW SULVEYS, APKIL, | | | Date | of | Survey | | 42 | 3-29 | 5-4 | | 3-31 | 4-1 | 4-1 | 4-1 | | 4-1 | 4-2 | 4-1 | | 5-31 | 4-2 | 3-28 | 3-27 |
| OREGON SN | | | | | Elcv. | | 3400 | 2500 | 2500 | | 2325 | 4755 | 2730 | 3990 | | 4755 | 4800 | 3 990 | | 4880 | 4500 | 2500 | 2600 |
| O | | | | | Sec. Twp. Range | | 8 } .E | 9E | 7E | | 7. | $7\frac{1}{2}E$ | 7臣 | 7E | | 7 <u>3</u> E | 7 <u>2</u> R | 7臣 | | 6臣 | H | 9 E | 55年 |
| | LION | | | | Twp | | 500 | 48 | 68 | | 9 S | 138 | 118 | 138 | | 138 | 158 | 138 | | 238 | 238 | 218 | 248 |
| | LOCATION | | | | Sec | | 35 | 53 | 14&15 | | 21 | 24 | 28 | 14 | | 24 | 35 | 14 | 異 | 7 | 12 | 15 | 27 |
| | | | Number | or | State | | 265 | 361 | 591 1 | | 551 | 351 | 553 | 552 | | 351 | 531 | 552 | ETTE RIVE | 321 | 522 | 521A | 323 |
| | | DRAINAGE BASIN | and | SNOW COURSE | | CLACKAMAS RIVER | Clackamas Lake | Clear Lake | Peavine Ridge | SANTIAM RIVERS | Breitenbush | Hogg Pass | Marion Forks | Santiam Junction | MCKENZIE RIVER | Hogg Pass | McKenzie | Santiam Junction | MIDDLE FORK WILLAMETTE RIVER | Cascade Summit | Champion | Waldo Lake | Willamotte Pass |



| 1961 |
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| APKIL, |
| SURVEYS, |
| SNO |
| OREGON |

| | | | | | | | | | | | - 7 | - | | | | | | |
|------------------------|----------------|--------------|--|---|-----------------------------|----------|--------------|-------------|---------|-------------|-----------------|-----------------|---|--------------|-----------------------------|---------------------------|-------------|---------------|
| TS | Past Record | Ar Water | Content (Inches) | (41101103) | | 26.0 | | 10.3 | | | L•0 | | 6.0 | | 25 0 • 5 4 • 5 | 7. 4.0 | 4.6 | 13.6 |
| SURTHEN | 1 | Isars | of Record | מונים ביין | | 12 | | 11 | | | 10 | | 12 20 14 | | 11 20 | 12 13 | 15 | 13 |
| SHOW COVER MEASURMENTS | | | te 1949 | CH CH | | 42.8 | | 27.8 | | | 0.0 | | 11 9 4 14 9 9 | | 24.2 | 31.8 | 6.2 | 14.2 |
| SHON CO | COMTENT (Take) | Same Approx. | Date | 000 | | 46.9 | | i i | | | 0.0 | | 9.6 5.7 20.4 | | 27.0 | 10.3 | 8 • 4 | 15.0 |
| 1 | WATER (| | 1951 | 1001 | | 29.8 | | | A G E | | 0.0 | | 7 2 3 3 2 2 2 0 5 | | 32.8 6.7 | 0,0 | 5.5 | 15,8 |
| | | Snow | Depth (In.) | (2117) | | 62.8 | | ort | RAIM | | 0.0 | | 19.0 | | 88*0 18°4 | 26.7 | 1591 | 42,8 |
| | | Date | Survey | 201 103 | | 4-2 | | No Report | IOKDI | | 3-31 | | 4 4 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | 3-19 | 3-28 | 3-28 | 3 - 18 |
| | | | H.) ev. | • ^ > > > > > > > > > > > > > > > > > > | | 4500 | | 3620 | N T E K | | 4900 | | 6200 5320 7200 | | 7 900 | 5293 5120 | 5100 | 0069 |
| | | | Sec. Hans | OGITE | | I B | | 7W | н | | 13E | | 17E 16E 16E | | 33E 31E | 29国 33元 3 | 32年 | 33E |
| NOI | | | The state of the s | C M | | 233 | | 128 | | | 298 | | 348 388 338 | | | 16S | | 32S |
| LOCATION | | អ | | - | 젎 | 12 | | 21 | | | 25 & 2 6 | | 12 12 | | 33 | 28 10 | 23 | 35 |
| | | Number | or State | 2 | TE RIVE | 522 | | 541 | | | 942 | | 922 811 841 | | 952 961A | 964 | 134 | 921 |
| | DRAINAGE BASIN | and | SNOW COURSE | | COAST FORK WILLAMETTE RIVER | Champion | MARY'S RIVER | Mary's Peak | | SILVER LAKE | Silver Creek | CHEWAUCAN KIVER | Mill Creek Quartz Mountain Summer Rim | HARWEY BASIN | Fish Creek Idylwild Camp | Izee Summit Lake Creek | Rock Spring | Silvies |



| | | | | | | | | | | | - 8 | - | | | | | | | | | |
|-------------|-------------------------|--------------------------------------|-----------------|------------------------|---------------|---------------|-----------------|------------|---------------|-------------|-------------|-------------|--------------|----------|--------------|------------------------|---------------|-----------|--------------|-------------|--------------------------|
| | TS | Av. Water Content | (Inches) | | 14.0 | 4 C |) • | | 2.9 | | 8 6 | | | 26.0 | 18.6 | 11.3 | 10.7 | 54.0 | 52.5 | | 7.0 43.7 |
| | SUREMEN | Years | Record | | 7 | 15 | 2 -i | | 11 | | 12 | | | 12 | 22 | 14 | T4 | ۲ ا | K) | | 14 18 |
| | SHOW COVER ME.SUREMENTS | (TU?) | 1949 | | 15,0 | 7.1 | | | 9.1 | | 15.2 | | | 42.8 | 30.9 | 24.2 | 10,5 | 49.0 | 56.6 | | 7.2 |
| | SNOW C | 1 | 1950 | | 16.1 | L• F | 4 | | 2.0 | | 12.6 | | | 46.9 | 30.0 | 22.8 | 18.4 | 47.1 | 57.4 | | 14.5 52.3 |
| 1951 | Ant Office A | 2 | 1951 | | 16.2 | က ကို င | | | 1.3 | | 12.7 | 표 5 5 | | 29.8 | 27.7 | 20 % | 19,4 | 33,53 | 56.1 | | 1.6 58.5 |
| "PRI L" | | Snow | (Ine) | | 44e7 | 17.9 | 0 | | 3.0 | | 31.8 | RATIN | | 62.8 | 68.5 | 51e4 | 53.0 | 79.5 | 153.8 | | 5.9 |
| SUAVEYS, | | Date | Survey | | 3-30 | 3 - 28 | -1 | | 3-30 | | 3-27 | OI SI | | 4-2 | 3-28 | 3-27 | 3 -1 5 | 3-29 | 3-27 | | 4-2 |
| OREGON SNOW | | | Elcv. | | | 5150 4800 | | | 6720 | | 5720 | C C C | | 4500 | | | | | 5 800 | | 4400 6018 |
| ORI | | ı | Sec. Twp. Range | | 26E | 31E | 750 | | 21E | | 21E | N E | | 1E | 至9 | 9E | 4E | 2足 | 至9 | | 7W 6E |
| | NOI | | Twp | | 198 | 158 | aT v | | 45N | | 398 | | | 238 | 27S | 268 | 275 | 318 | 258 | | 418 318 |
| | TOCTTON | | Sec | | ~ | 20 | 3 | | 17 | | Ŋ | | | 12 | 59 | 19 | 1 : | 27 | 20 | | 17 |
| | | Numbor | State | nt'd.) | 965 | 247B 136 | 77 | | Nev. | | 911A | | | 522 | 743 | Cr. 742 | 741 | 7217 | 744 | | 7216 831 |
| | | DRAINAGE BASIN and SNOW COURSE | | ELRNEY BASIN (Cont'd.) | Snow Mountain | Starr Ridge | o cinkingwa cer | GUANO LAKE | Bald Mountain | WARNER LAKE | Camas Creek | | UMPQUA RIVER | Champion | Diamond Lake | No. Umpqua Nr.Lake Cr. | Trap Creek | Whaloback | Windigo Pass | ROGUE RIVER | Althouso Amnio Spring |



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| | | LOCATION | LION | | | | | | (5) いき | MIN MIN | A DOUGHER TO | Ω. |
|---|-------------|----------|---------------------------------|--------------|----------|-------------------------|------------------|---------|---|--------------|--------------|------------------|
| DRAINAGE BASIN | | | | | | | | WATER. | Gaisas (| Tit.) | | |
| and | Number | | | | | Date | Snow | | 3 | | Yoars | Av .Water |
| SNOW COURSE | cr c+c+c | 000 | ي ال | | Elour. | of | Depth | 1051 | 1950 | 0701 | of Poord | Content (Trabes) |
| e de la company | 252 | 200 | + MM | naligo | TTC A | our vey | / 777 | 1001 | 1000 | 13#G | nccord | (THOMES) |
| ROGUE RIVER (Cont'd. | • | | | | | | | | | | | |
| TO - 1 7 1 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 000 | ر 2 | Č | זפו ר | 0039 | 02. 2 | ٠ د د | 200 | 2.00 | 76.77 | 7 | 7 00 |
| big ked Mountain | 163 | 7 C | 4 5 6 7 7 8 8 | H 12 | 6300 | 000 | サック ロ O O | 0010 | 20.02 | 2 00 | 2 6 | ₩ • 0 % C |
| Billie Creek Davide | 777 | ء م | 000 | ن با از | 2000 | 2 100 2 200 2 200 | 00000 | 0 0 C | 3000 | 0440 07 7 | 22 - | 40°4 |
| Fish Lake | 7.27 | ာ ၀ | 0/0 | 를 다 | 4665 | 2 CO | 48.4 48.4 | 18.7 | 4 C C C C C C C C C C C C C C C C C C C | 36.0 | 1, 15 | 10•6 24.9 |
| Hobart Take | 7221 | 77 | 408 | 23 五 五 | 5010 | 3-30 | 3.6 | 10.0 | 6.7 | ο σ. Φ | 2 2 | 7.0 |
| Hvatt Prairie Res. | 723 | 15 | 398 | 3年 | 4 900 | 3-28 | 16.9 | 8 | 13.8 | 15.8 | 18 | 8.7 |
| Little Red Mtn. | 7210 | 25 | 40S | 214 | 6500 | 3-30 | 49.6 | 16,3 | 22°5 | 30.6 | 15 | 22.2 |
| Park Headquarters | 828 | ω | 318 | EE | 6450 | 4-2 | 157.1 | 72.5 | 65.6 | 70.9 | 7 | 0•09 |
| Scragg Mtn. (Calif.) | 7220 | 6 | 47 N | 101 | 6200 | 3-25 | 65.8 | 30 •4 | 40.0 | 47 • 9 | ග | 25.5 |
| Seven Lakes #1 | 7211 | 23 | 348 | 5里 | 0089 | 5-30 | 172.4 | 72.4 | 74.5 | 77.6 | 15 | 55.8 |
| Seven Lakes #2 | 7212 | 56 | 338 | 5臣 | 6200 | 3-28 | 116.2 | 45 • 8 | 52.0 | 60.3 | 12 | 42.2 |
| Silver Burn | 7219 | 30 | 308 | 4E | 3720 | 4-1 | 32.6 | 14.0 | 23.0 | 16.2 | 14 | 10.1 |
| Siskiyou Summit | 728 | 17 | 403 | 2E | 4630 | 3-29 | 2.5 | 1.0 | 5.7 | 5.8 | 12 | 3.6 |
| South Fork Canal | 7218 | 12 | 338 | 3臣 | 3500 | 4-1 | 0.0 | 0.0 | 0•9 | 3 .8 | 14 | 1.2 |
| Wagner Butte | 7213 | -1 | 40S | 1W | 0069 | 4-2 | 55.1 | 13.7 | 21,7 | 23.2 | 16 | 17 41 |
| Whaleback | 7217 | 23 | 21S | 2E | 5140 | 3-29 | 79.5 | 33.3 | 47.1 | 49.0 | 13 | 34.0 |
| KLAMATH LAKE BASIN | | | | | | | | | | | | |
| Annie Spring | 831 | 13 | 318 | 9 | 8018 | 4-2 | 131.6 | 58.5 | 52.3 | 58.2 | 18 | 43.7 |
| Beatty 2/ | | 22 | 368 | 12E | 4300 | 3-31 | 0 | 0.0 | 000 | 000 | 24 | 0.0 |
| Billie Creek Divide | 722 | 30 | 368 | 5E | 5300 | 3-30 | 53.6 | 21.0 | 30.2 | 34.6 | 20 | 23.4 |
| Bly 101 Ranch 2/ | | 22 | 358 | 14E | 4800 | 3-31 | 0 | 0,0 | 0.0 | 000 | 23 | 0•0 |
| ٦. | 834 | 21 | 278 | 8E | 4760 | 4-1 | 56.4 | 11.0 | 1422 | 12.8 | 14 | 7.8 |
| Chiloquin 2/ | | 34 | 348 | 7正 | 4187 | 3-31 | 0.0 | 0.0 | 0.0 | 0.0 | 23 | 0.1 |
| Crowder Flat (Calif.) | | 30 | 47N | 11E | 5200 | 3-31 | 0.0 | 0.0 | 0.0 | 0.7 | 11 | 0.1 |
| Crystal $2/$ | | 26 | 34S | 至9 | 4200 | 3-31 | 20•0 | 10.2 | 12.6 | 9 0 | 21 | 4.9 |
| 2/ - Water content determined by melti | determin | ed by | melti | ng one | measured | sample | (The Calif. Ore. | f. Ore. | Power Co.'s station) | o, 's ste | ation) | |

* · · • .

| | LOCATION | | | SONO SONO | ONO!! COVER MEADOURE HEREIN | प्रमाणका राज | |
|----------------|--|--------|------------|---------------------|------------------------------|--------------|-------------|
| DRAINAGE BASIN | of spinors, while a spinor development of the spinors of the spino | | | Water Content (In.) | at (In.) | P | Past Record |
| and | Number | Date | Snow | Sam | Same Approx. Years Av. Later | Years | Av . Later |
| SNOW COURSE | or | 3.5 | Depth | | Da te | $^{ m ot}$ | Content |
| | State Sec. Twp. Range Elev. | Survey | (In.) 1951 | | 1950 1949 Record (Inches) | Record | (Inches) |

| 0,0 | 0.8 | 8,7 | 1,8 | 9 c. 4 | 04 09 | 4.2 | 4.6 | 55.8 | 42.2 | 5.0 | 16.1 | 26.3 | 3.3 | 0.5 | | 8 6 | 4.2 | 2.4°C | 5.0 |
|-----------------|-------------------|--------------------------|--------------|-------------------|-------------------|-----------------|--------------------|-------------------|-------------------|------------|------------|--------------|---|-------------|------------------|-------------|-----------------|--------------------|------------|
| 24 | 23 | 18 | Ĥ | 14 | 7 | 20 | 20 | 15 | 15 | O | 14 | 14 | 14 | 20 | | 12 | 20 | 20 | 6 |
| 2,5 | ى 0 | 15.8 | 1 | 16,7 | 8.07 | 904 | 7.5 | 27.06 | 60.3 | 13,2 | 14.9 | 31.9 | 5.0 | 1.1 | | 15.2 | 9.4 | 7.5 | 13.2 |
| 1.1 | 4.0 | 13,8 | 2 .6 | 13,0 | 65.6 | 5.27 | 5.3 | 74.5 | 52.0 | 10.6* | 20.4 | 28,8 | 2 | 0.0 | | 12,6 | | | |
| | | | | | | | | | | | | 35 .8* | | | | 1207 | 2.3 | | 9•9 |
| | | | | | | | | | | | | 85 .6 | | | | 31,8 | 7.9. | Report | 18.0 |
| 5.31 | 3-31 | 85 53 8 53 8 | 25.57 | 323 | 42 | 4-2 | No F | 3-30 | 3-28 | 3-29 | 4-1 | 4-2 | 4-3 | 7 2 2 | | 3-27 | 4-2 | No F | 3-29 |
| 4150 | 4200 | 4900 | 4535 | 4960 | 6450 | 5320 | 5504 | 6800 | 6200 | 2600 | 7200 | 5350 | 5700 | 4600 | | 5720 | 5320 | 5504 | 2600 |
| 7,50 | 四9 | 5月 | 7 E | 5 E | 678 | 15正 | 16正 | 巴田 | 9日 | 16五 | 16E | 72E | 日日 | ET. | | 21E | 16E | 16E | 16E |
| 338 | 368 | 398 | 358 | 37S | 31.5 | 388 | 378 | 345 | 333 | 40S | 333 | 328 | 53.83 8.83 8.83 8.83 8.83 8.83 8.83 8.83 | 318 | | 398 | 388 | 37 S | 40S |
| 22 | 83 | 15 | 1 | 11 | ω | 82 | 33 | 3 | 26 | 4 | 15 | 22 | 16 | 20 | | വ | 2 | 33 | 4 |
| | | 723 | | 835 | 828 | 811 | | 7211 | 7212 | 837 | 841 | 836 | 842 | | | 911A | 811 | | 837 |
| Fort Klamath 2/ | Harriman Lodge 2/ | Hyatt Prairie Res. | Kirk 2/ | Lake of the Woods | Park Headquarters | Quartz Mountain | Quartz Mountain 2/ | seven Lakes No. 1 | Seven Lakes No. 2 | Stramberry | Summer Rim | Sun Mountain | Taylor Butte | Yamsey 2/ | GOOSE LAKE BASIN | Camas Creek | Quartz Mountain | Quartz Mountain 2/ | Strawberry |

2/ Water content determined by melting a measured sample (The California Oregon Power Company's Station).
* Telegraphic - Subject to minor revision

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| | OT | LOCATION | N | | | | SNOW | SNOW COVER MEASUREMENTS | ASUREME | SINE | | |
|------------------------------|------------|----------|-----|-----------------|----------------|-------------------|----------|-------------------------|---------------------|--------------|--------|--------------|
| DRAINAGE BASIN | | | | | | | | Water C | Water Content (In.) | (In.) | Pas- | Past Record |
| and | Number | | | | | Da te | Snow | | Same A | Same Approx. | Years | Av.Water |
| SNOW COURSE | or | | | | | of | Depth | | 23 | Date | of | Content |
| | State | Sec. | Twp | Sec. Twp. Range | Elev. | Survey | (In.) | 1951 | 1950 | 1949 | Record | (Inches) |
| KLAMATH BASIN | | | | | | | | | | | | |
| Gerber Dam | 839 | 12 | 398 | 13E | 4850 | 1-15-51 | 7.2 | 1.2 | 2.9 | 1 | ~ | 2.0 |
| Gerber Dam | 829 | 12 | 328 | 13压 | 4850 | 3-7-51 | 7 •0 | ა• ე | 1 | 4.7 | Н | 4.7 |
| Yamsey 2/ | | 20 | 218 | 11E | 4600 | 2-28-21 | 10.5 | 3.0 | 1.1 | 6.8 | 22 | 2.4 |
| MCKENZIE RIVER | | | | | | | | | | | | |
| McKenzie | 531 | 35 | 158 | 7克田 | 4800 | 3-13-51 | 138.7 | 52.8 | 1 1 | 1 | 1 | 1 |
| OWYHEE RIVER | | | | | | | | | | | | |
| Disaster Peak | Nev.6 | ∞ | 47N | 34臣 | 6500 | 3-8-51 | 51.5 | 16.7* | 6.3 | 12.7 | 82 | 9.5 |
| ROGUE RIVER | | | | | | | | | | | | |
| Billie Cr. Divide | 722 | 30 | 368 | 5正 | 5300 | 3-1-51 | 53.8 | 21.5** | 28.4 | 1 | 18 | 21.5 |
| Fish Lake | 725 | (C) | 378 | 4正 | 4865 | 3-15-51 | 39.8 | 13.2 | 16.3 | 22.9 | 83 | 19•6 |
| | | | | CORAEC! | CORRECTIONS OF | EARLIER PUBLISHED | UBLISHED | RESULTS | | | | |
| POWDER RIVER | | | | | | | | | | | | |
| Anthony Lake Anthony Lake | 155 155 | 18 | 78 | 37E 37E | 7125 7125 | 2-3-51 | 61.0 | 16.5 | 24.0 | 24.0 | 01 | 18.5 24.0 |

SPECIAL MID-MARCH SNOW SURVEYS; SWOW SURVEY DATA NOT PUBLISHED IN MARCH 1 REPORT

* Telegraphic - Subject to minor revision ** Partly estimated 2/ The California Oregon Power company's Station



VALLEY PRECIPITATIONA

| DRAINAGE | CURPE | T YEAR | LAS ?' | YEAR |
|-------------------|--------------|-----------------|-------------------|---------------|
| DIVISIONS | Oct. 1, 1950 | - April 1, 1951 | Oct. 1, 1943 P | April 1, 1950 |
| | 4 | <i>D</i> | | D |
| Southeastern | 6.93 | ÷ 1.06 | 6,23 | -0.21 |
| Southcentral | 9.14 | + 2.93 | 4.70 | -1.61 |
| Central | 11.03 | + 3.94 | 6.57 | +0.89 |
| Columbia River | 16.55 | + 5.57 | 12,58 | +1.54 |
| Wallowa Mountains | 10.03 | - 4 5 | 9,61 | +0.17 |
| Blue Mountains | 9.33 | , + .31 | 10,19 | -0.10 |
| Southern | 28,63 | + 9.98 | 18.50 | +0.57 |
| Willamette Valley | 58.21 | +18.99 | 49.42 | +9,60 |
| | | | | |

P - Inches Precipitation

D - Inches Departure from Normal

Malheur and Owyhee drainages. Southeastern Southcentral Interior Basin drainages and Goose Lake. Deschutes and Crooked drainages. Central Lower valleys of the Walla Walla, Umatilla, John Day, Columbia River Deschutes and Hood River drainages. Imnaha, Wallowa, Catherine, Eagle and Pine Drainages. Wallowa Mountains

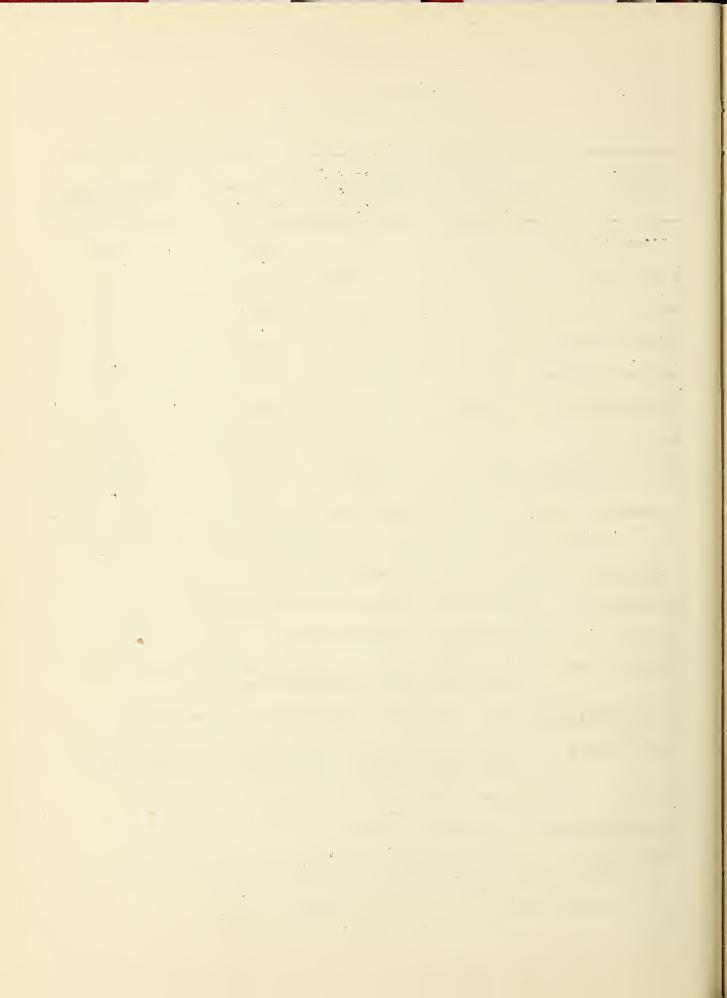
Upper valleys of the Burnt, Powder, Grande Ronde, Umatilla, Blue Mountains Walla Walla, John Day, Silvies and Malheur drainages.

Southern Umpqua, Rogue and Klamath Drainages.

Willamette Valley All Willamette drainages.

Note: Stations used for determining the averages for the current year are not necessarily the same as those used last year.

a - Preliminary data computed from Weather Bureau records.



The following organizations cooperate in the Oregon snow survey work:

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers

FEDERAL

Department of Agriculture
Forest Service
Soil Conservation Service
Department of Commerce
Weather Eureau
Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
War Department
Army Engineer Corps

PUBLIC UTILITIES

California-Pacific Utilities Company Portland General Electric Company The California Oregon Power Company

MUNICIPALITIES

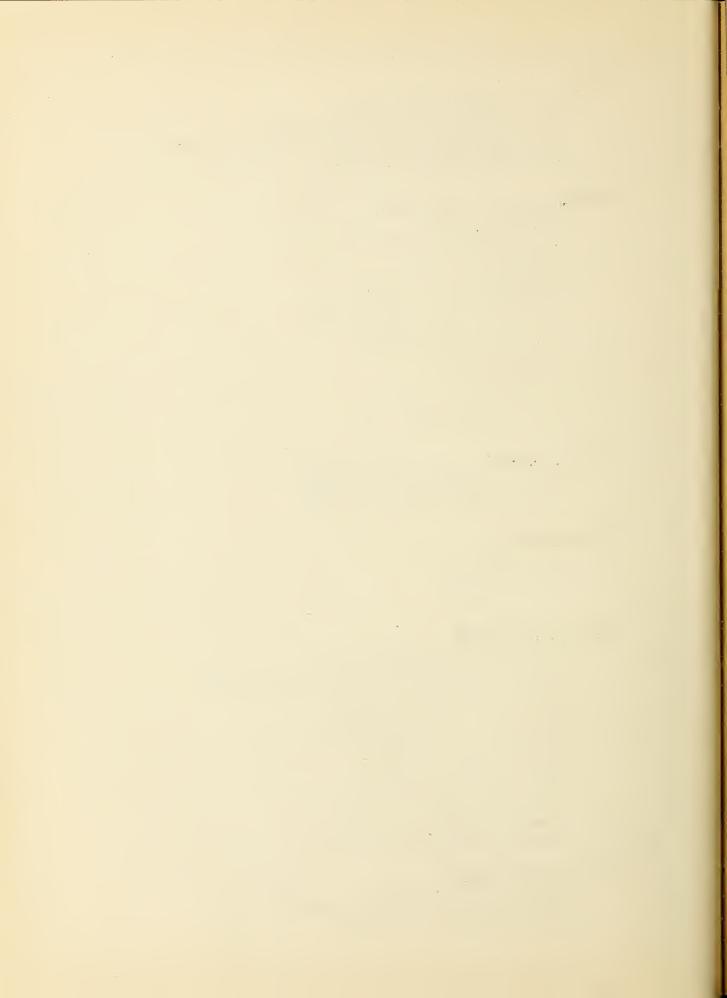
City of Baker City of Corvallis City of LaGrande City of The Dalles

IRRIGATION DISTRICTS

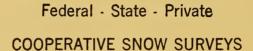
Associated Ditch Companies
Central Oregon Irrigation District
Deschutes County Municipal Improvement District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valley Irrigation District
Lakeview Water Users Incorporated
Medford Irrigation District
Ochoco Irrigation District
Rogue River Irrigation District
Talent Irrigation District
Vale-Oregon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company South Wasco Soil Conservation District The Crag Rats-Hood River-Oregon







Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"